

PRACTICE TEST 18

Reasoning Through Language Arts

Welcome!

Here is some information that you need to know before you start this test:

- You should not spend too much time on a question if you are not certain of the answer; answer it the best you can, and go on to the next question.
- If you are not certain of the answer to a question, you can mark your answer for review and come back to it later.
- This test has three sections.
- You have **35 minutes** to complete Section 1.
- When you finish Section 1, you may review those questions.
- You may not go back to Section 1 once you have finished your review.
- You have **45 minutes** to complete the Extended Response question in Section 2.
- After completing Section 2, you may take a 10-minute break.
- You have **60 minutes** to complete Section 3.
- When you finish Section 3, you may review those questions.

Turn the page to begin.

Reasoning Through Language Arts, Section 1

Questions 1 through 8 refer to the following passage.

Excerpt from *Across America by Motorcycle* by C. K. Shepherd

- 1 I found a hotel that, from the outside, just suited my fancy. Plain, large and unpretentious, it described itself in an illuminated sign as the “National.” I booked a room at three dollars and sallied forth to see the sights.

- 2 I was impressed with Washington. It is truly a city of beautiful streets and magnificent buildings. Undoubtedly it is the city de luxe of America. Being the capital, wealth is lavished upon it. No factories or barren wastes disfigure its graceful countenance. Every street or avenue glistens at night with a bewildering multitude of illuminated signs. This method of advertising is typically American. The first impression of a stranger visiting a large American city at night is that he is in a children’s luminous palace. There are illuminations and decorations of every conceivable nature. Sometimes a single sign advertising perhaps some particular brand of chewing-gum or cigarette or motor-car has thousands and tens of thousands of lights wonderfully displayed in different colors and arranged in different series, one series flashing into view as another disappears, then a few seconds later giving place to another still more wonderful, and finally there comes a grand climax in which all the colors and all the series and all the figures blaze forth in an indescribable orgy of light.

- 3 When I found myself finally back in my hotel, I was to be the victim of still another disillusionment. No country anywhere could rival America for hotels, I had thought. But I had not then experienced the “National” at Washington. The room allotted to

me was literally an outrage. It was of the very poorest that one would expect to find in an East End boarding-house in the Old Kent Road. It had one window, which faced on to an unimaginably dreary “area.” The carpet was threadbare and colorless. The furniture, consisting of one bed, one dressing-table, one wardrobe and one chair was obviously suffering from advanced senile decay. There was a washbasin in one corner that boasted of two taps and a piece of wood to stop the hole up with. The door showed signs of having been minus a lock for many a long day. I was too tired, however, to bother about trivialities of detail, so putting my revolver under the blanket near me in case of possible eventualities, I laid me down in peace to sleep.

4 Nothing occurred, however, to disturb my peace of mind or body throughout the night. When I came to square up that morning I paid my respects and three dollars to the management.

5 “See here, Mister Manager,” I said in such a tone that everyone within hearing distance had the benefit of it as well, “I’ve done a bit of travelling here and there, but never in ANY city at ANY time have I struck ANY hotel that for sheer rottenness compares with THIS one!”

6 I have an idea at the back of my mind that that manager-man doesn’t love Englishmen!

1. Which definition best matches the use of the word “unpretentious” in paragraph 1?

- A. lacking excessive ambition
- B. free-spirited, easygoing
- C. without excessive ornament

D. straightforward, direct

2. How does the nighttime view of the city of Washington affect the narrator?

- A. The narrator is overwhelmed by the city's confusing illumination.
- B. The narrator wonders at the number of lights used in the signs.
- C. The narrator rejoices in the splendor of the nighttime cityscape.
- D. The narrator is disillusioned to find it typical of American cities.

3. Why does the narrator describe an American city at night as a "children's luminous palace"?

- A. to show that there is a magical innocence about cities at night
- B. to illustrate the size and number of illuminated advertisements
- C. to make a poetic statement about the regal nature of America
- D. to downplay the importance of American cities

4. What does the phrase "still another disillusionment" reveal about the narrator's journey?

- A. Not all the narrator's assumptions about America have been correct.
- B. The narrator was disappointed with the nighttime landscape of Washington.
- C. The narrator had not had time to see the "National" at Washington.
- D. The narrator was reluctant to return to the hotel.

5. Why does the author use “senile” in paragraph 3?

- A. to give the reader a sense of the advanced age of the hotel
- B. to show that the chair in the room was old while the other furniture was new
- C. to empathize with the elderly manager of the hotel
- D. to emphasize that the condition of the furniture matches the rest of the room

6. In this excerpt the narrator puts a revolver under the blanket before going to sleep. What characteristic does this action reveal about the narrator?

- A. fear about being in a rough neighborhood
- B. exhaustion so extreme that the narrator is too tired to put the revolver away properly
- C. a naturally violent temper that leads to being armed at all times
- D. preparation for questionable situations a traveler might encounter

7. Read this sentence.

“I have an idea at the back of my mind that that manager-man doesn’t love Englishmen!”

Why does the author conclude the excerpt with this sentence?

- A. to give a humorous slant to the scene by using an understatement
- B. to offer a guess about the manager’s personal preferences
- C. to show the narrator’s suspicions about the manager that will be addressed in the next segment

D. to express regret over having complained to the manager

8. What can the reader infer about the narrator?

- A. The narrator's overall impression of Washington is negative.
- B. The narrator is not native to the United States.
- C. Washington is the first stop on the narrator's trip.
- D. The narrator is loud-mouthed and argumentative.

Questions 9 through 16 refer to the following passage.

**Should American Cities Adopt a Commission Form of
Government? by Leverett S. Lyon**

The Affirmative:

- 1 During the last quarter-century, municipal organization has trended toward concentration of powers. Some cities have recognized the wisdom of such action, but have unwisely attempted to concentrate only the executive power whereas the real solution lies in concentrating all governmental authority in one responsible body.
- 2 So evident is the need for this solution that there is now a charter revision committee meeting in New York to consider eliminating the separate council entirely, and creating in its place a small commission possessing both legislative and administrative authority.
- 3 What is true of New York is true of scores of other cities. Within the past two years more than a dozen states have provided for a commission form of government, while within the past year more than a dozen cities have thrown away their old forms and assumed the commission system.

- 4 The success of a separate legislative body in state and national government is the only excuse for its retention in our cities, yet such a government is unsuited to modern municipalities. Unlike the state, the work of a city is largely administrative and of a business character, and does not require a separate council to legislate. We do not find, as in the state, the necessity of a large and separate body to represent the various localities. The city has a large population living in a restricted territory; in the state it is scattered.
- 5 The present principle of separation makes possible concentration of power, without a corresponding concentration of responsibility. When one branch of the government dominates, checks and balances between the departments are lost. The system of checks and balances failed in New York, where the mayor is supreme, and where the city has been plundered of sums estimated at 7 percent of the total valuation of real estate. It failed in St. Louis, where the council dominated, and where "Boss Butler" paid that body \$250,000 to pass a street railway franchise. Neither did it work in Philadelphia, which has been plundered of an amount equal to 10 percent of her real estate valuation.
- 6 Therefore, we must concentrate municipal authority; we must co-ordinate departments, eliminate useless boards and committees and fix individual responsibility. This, we propose to do by establishing a commission form of government, where all governmental authority is vested in one small body of men, who individually act as the heads of administrative departments, but who collectively pass the needed legislation. Thus, instead of a council with restricted powers and divided authority, we have a few men assuming positions of genuine responsibility, as regards both the originating and enforcing of laws.

The Negative:

- 7 We do not defend the evils of present city organization. We believe that far-reaching reforms must be instituted. The issue then is, does the commission form offer a satisfactory solution of our municipal problems?
- 8 In many forms today, as the gentlemen have depicted, the relations between the legislative and executive departments are such that responsibility cannot be fixed. But every conspicuous example of municipal success is based upon the proper correlation between these departments. Municipal success in Europe is an established fact. There we find the cabinet form, in which governing power is vested in the legislative body, which then delegates administrative functions to the cabinet. Charleston, S. C., Elmira, New York, Los Angeles, Cal., are a few of the typical American cities which have successfully adopted the mayor and council form by utilizing the model charter of the National Municipal League.
- 9 Therefore, in whatever form, the principle of a proper division of functions must be embodied. The Affirmative must admit that, after fifteen years of misrule under the commission form in Sacramento, the freeholders by unanimous choice again adopted distinct legislative and administrative bodies; and that the commission form has lately operated but a few years in a few small cities.
- 10 Evils in our cities are due to bad social and economic conditions, and to state interference in purely local affairs. In the United States the city may not act except where authorized by the state. In Europe the city may do anything it is not forbidden to do, and municipal success there is based on this freedom. The European city makes its own local laws, not in conflict with,

but in addition to, state law. But in the United States the state legislature failed to distinguish between matters of interest to the state government and those of exclusive interest to the cities.

11 The remedy lies in restoring to the city its proper field of legislation. Already thirty states have passed constitutional amendments granting greater legislative powers to the cities. Five states now allow cities to amend their own charters. But in direct opposition to this movement for municipal home rule, the commission form takes the last step in the destruction of the city's legislative body and fosters continued state interference. President Eliot says that the functions of the commissioners will be defined by the state.

12 We have shown the real causes of municipal evils, and they are to be remedied without tampering with the fundamental principles proved by time and experience. The Affirmative say: change the fundamental principle. The Negative say: retain the principle of distinct legislative and administrative bodies, but observe a proper correlation between them. We would remedy bad social and economic conditions, and, most important of all, give the city greater freedom in powers of local self-government.

Source: Adapted and abridged from *Elements of Debating*, by Leverett S. Lyon, 1919.

9. What evidence does the Affirmative use to support their claims? Drag and drop four pieces of evidence into the chart. (For this practice test, write the statement letters in the chart.)

Claim	Evidence	Evidence

The need for concentrating all power into a commission is evident.		
When one branch of the government dominates, checks and balances between the departments are lost.		

(a) There is a charter revision committee meeting in New York.

(b) More than a dozen cities have thrown away their old forms.

(c) Some cities have lost funds due to a corrupt administration.

(d) The city has a large population living in a restricted territory; in the state it is scattered.

(e) The council in St. Louis took a bribe to pass a street railway franchise.

(f) During the last quarter-century, municipal organization has trended toward concentration of powers.

10. Which idea about city government is included in the Affirmative?

- A. City governments require a separate council to legislate business and administrative concerns.
- B. The deplorable conditions of the cities are caused by economic and social factors.
- C. Checks and balances between departments are the only way to guarantee successful government.
- D. Many cities have completely revised the structure of their municipal governments.

11. Which conclusion is supported by the argument of the Negative?

- A. The cabinet form of city government is currently found only in Europe.
- B. The cabinet form of city government is preferable to the mayor and council form.
- C. Separation of departments is partly responsible for corruption in city government.
- D. There are guidelines to help cities set up a successful form of government.

12. Read the following sentence from paragraph 11.

Already thirty states have passed constitutional amendments granting greater legislative powers to the

cities.

What idea mentioned by the Negative does this sentence support?

- A. The remedy is to give the city greater freedom in powers of local self-government.
- B. In Europe the city may do anything it is not forbidden to do.
- C. Retain the principle of distinct legislative and administrative bodies.
- D. Far-reaching reforms must be instituted.

13. Which detail in the Negative's argument supports the idea that there are disadvantages associated with the commission form of government?

- A. "...a few of the typical American cities which have successfully adopted the mayor and council form by utilizing the model charter of the National Municipal League..." (paragraph 8)
- B. "...the freeholders by unanimous choice again adopted distinct legislative and administrative bodies..." (paragraph 9)
- C. "Evils in our cities are due to bad social and economic conditions..." (paragraph 10)
- D. "...the commission form has lately operated but a few years in a few small cities." (paragraph 9)

14. How does the Negative build the argument that the Affirmative's position is incorrect?

- A. The Negative brings up alternative city models that the Affirmative fails to acknowledge.

- B. The Negative denies the Affirmative's assertion that general city government is in need of reform.
- C. The Negative calls into question the use of the sample cities presented by the Affirmative.
- D. The Negative demonstrates that the Affirmative is uninformed about the true workings of city government.

15. How are the conclusions of the Affirmative and the Negative similar?

- A. Both base their conclusions on the premise that current city conditions are problematic and need to be addressed.
- B. Both convey a dedication to the fundamental principles on which the broader U.S. government is based.
- C. Both advocate for the concentration of municipal power into one unified body with full responsibility.
- D. Both conclude that the balancing of powers is essential to the proper workings of city government.

16. Based on the information in the two articles, the Affirmative and the Negative share which perspective?

- A. There is one form of government that is best suited to cities.
- B. The states interfere too much into matters best left to local policymakers.
- C. The current conditions in the cities are in serious need of reform via the commission model.
- D. The city has concerns distinct from those of the state.

17. The passage below is incomplete. For each "Select" option, choose the option that correctly completes the sentence. (For this practice test, circle your selection.)

September 20, 2011

Ms. Celine Margot
Chair, AIM Foundation
1235 Deer Park Road
Rochester, NY

Dear Ms. Margot,

I was so honored to meet you last week at the AIM Foundation Benefit. When I walked in the door, I had no idea I was about to be introduced to a Phi Kappa sister: Although, I should not really have been surprised; the members of our sorority

Select...	▼
are known nationwide, not only for their business success but also for	
is known nationwide, not only for their business success but also for	
is known nationwide, not only for its business success but also for	
are known nationwide, not only for business success, but also for	

their works of charity. I was touched to hear the outreach that AIM is doing, helping under-resourced villages in several countries have access to clean water. Clearly, your foundation has a commitment to bettering the lives of those communities who live closest to subsistence level.

As we discussed that night, my company, Clear Image, has great experience helping organizations

Select...	▼
to maintain a positive online reputation, for over 5 years	
to maintain a positive online reputation for over 5 years	
to maintain a positive online reputation. For over 5 years	
to maintain for over 5 years a positive online reputation.	

we have been at the forefront of social media and viral image marketing and during that time the clients we have had range from Fortune 500 companies to philanthropic fraternities. We produce content highlighting your activities via blogs and user

Select...	▼
profiles, maintain a watch on major search engines for traffic to your site,	
profiles, maintain a watch on major search engines for traffic to your site, and	
profiles, maintaining a watch on major search engines for traffic to your site,	
profiles, major search engines are maintained on watch for traffic to your site, and	

collect news reports with a bearing on your organization's goals.

After we connected at the fundraiser, it occurred to me that with AIM approaching 10 whole years of community service, the time would be right for a major media push touting AIM's

accomplishments to date. We have, in fact, initiated special media events for several companies. As AIM's 10th anniversary nears, your board of directors has probably been considering ways to make that anniversary special. To that end, I suggest we meet so that I could present some of the promotional work we have done and give you a sense of the nuances of what

Select...	▼
it	
they	
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offer. Clear Image might be the perfect partner to

handle the celebration of "10 Years of AIM."

Feel free to call me at 748-555-2398 if you'd like to explore how Clear Image can make AIM more prominent in the world of philanthropy.

Yours truly,

Misha Ayakusi
Coordinator, Philanthropy & Social Service Image
Enhancement

Reasoning Through Language Arts, Section 2

Extended Response Answer Guidelines

Please use the guidelines below as you answer the Extended Response question on the Reasoning Through Language Arts test. Following these guidelines as closely as possible will ensure that you provide the best response.

1. **Please note that this task must be completed in no more than 45 minutes.** However, don't rush through your response. Be sure to read through the passage(s) and the prompt. Then think about the message you want to convey in your response. **Be sure to plan your response before you begin writing.** Draft your response and revise it as needed.
2. As you read, think carefully about the **argumentation** presented in the passage(s). "Argumentation" refers to the assumptions, claims, support, reasoning, and credibility on which a position is based. Pay close attention to **how the author(s) use these strategies to convey their positions.**
3. When you write your essay, be sure to
 - **determine which position presented** in the passage(s) is **better supported** by evidence from the passage(s)
 - **explain why the position you chose is the better-supported one**
 - **remember, the better-supported position is not necessarily the position you agree with**
 - **defend your assertions with multiple pieces of evidence** from the passage(s)
 - **build your main points thoroughly**
 - **put your main points in logical order** and tie your details to your main points

- **organize your response carefully** and consider your **audience, message, and purpose**
- **use transitional words and phrases** to connect sentences, paragraphs, and ideas
- **choose words carefully** to express your ideas clearly
- **vary your sentence structure** to enhance the flow and clarity of your response
- **reread and revise your response** to correct any errors in grammar, usage, or punctuation

Instructions

Read

- On the [this page](#) tab above, you will read two texts presenting **different views** on the same topic.
- **Both writers argue** that **their position** on the issue is **correct**.

Plan

- **Analyze** the two texts **to determine** which writer presents the **stronger case**.
- **Develop your own argument** in which **you explain** how one position is **better supported** than the other.
- **Include** relevant and specific **evidence** from **both sources** to support your argument.

Write

- **Type** your response in the **box on the right**.
- Your response should be approximately **4 to 7 paragraphs of 3 to 7 sentences each**.

- **Remember** to allow a few minutes **to review and edit your response.**

You have up to **45 minutes** for reading, planning, writing, and editing your response.

Assessing the Proposed \$15 Minimum Wage

- 1 The minimum wage (first introduced as law in 1938) is the lowest hourly wage that employers may legally pay to workers. During the historic 1963 civil rights march on Washington, Bayard Rustin, a march organizer, called to increase the minimum wage from \$1.15 an hour to \$2 “so that men may live in dignity.” Adjusted for inflation, \$2 an hour in 1963 would be equivalent to \$18.17 an hour in 2021.
- 2 Recently there has been debate about whether the minimum wage of workers should be raised. Present-day minimum-wage workers seek a raise from \$7.25 an hour (established in 2009) to \$15 an hour.

How raising the minimum wage might harm workers

- 3 While there has been much talk about increasing the minimum wage to \$15, it is important to examine who exactly is earning minimum wage. The majority of minimum wage earners work in the service industry or fast food industry, for large nationwide food chains or big-box store corporations. So far, the demand for a higher wage seems reasonable: couldn't these multibillion-dollar corporations afford to pay their employees more? However, the truth is that many of these corporations are made up of innumerable small franchises, and

the franchises are the true employers of the minimum-wage workers.

- 4 Each franchise operates as a very small independent company with little overhead to meet unexpected expenses. If these franchises were forced to pay a \$15 wage, layoffs would likely occur, if there were not sufficient funds to retain all the employees. The remaining employees would then have to do extra work to compensate for their fired coworkers.
- 5 Even if the franchise finds it can “make do” with fewer workers, those laid off due to the wage increase are unlikely to be rehired. If a franchise does try to retain all its workers with a \$15 wage, then it must struggle to remain in business, risking the jobs of all its employees in the process. Businesses in this situation also have no financial room to create new jobs, causing stagnation in the economy. And any jobs that remain are now priced out of the reach of unskilled workers, pushing them further into poverty.
- 6 Additionally, many economists feel that \$15 represents too much compared to other wages in the economy. The current median wage in the U.S. is \$22 per hour, so this proposed increase would make the minimum wage over 60% of the median. Canadian studies show that workers lose jobs and have increased workloads when the minimum wage is more than half the median wage. In these studies, the lost jobs might have meant a franchise that migrated to the U.S., or the hiring of undocumented workers at a substandard wage.
- 7 But the same studies showed that a minimum wage of less than 45% of the median would have almost none of those undesired results. The current federal minimum wage of \$7.25 is 33% of the median. So, opponents claim, according to the

Canadian studies, maintaining the current minimum wage would be a better measure to guarantee jobs. Opponents of the \$15 an hour minimum wage claim that guaranteeing jobs in the long term should outweigh any short-term gains from a severe hike in pay, and any rise in the minimum wage should follow an upward trend in national wages overall.

How an increase in the minimum wage benefits the economy

8 Supporters of the \$15 minimum wage point out that the wages earned by minimum workers are much more likely to return to the economy than wages earned by those in higher-income brackets. From 2002 to 2021, wages have stagnated or declined for those at the bottom of the wage ladder, which translates to stifled spending. As time goes on, a greater percentage of available jobs become low-wage jobs, as jobs for the middle class are gradually lost. In 2019, economists estimated that 44% of Americans work in low-wage jobs, including retail, food services, domestic services, and health-care support. Often, these are jobs that can be neither outsourced nor automated, contradicting the objection that a wage increase would force employers to shed workers or relocate.

9 Those in higher economic brackets don't spend the same proportion of their income as minimum wage workers do, and they don't spend it on the same types of goods. Rich people can afford not to spend: when they do spend, they buy luxury items from luxury sellers. By contrast, poor people dedicate most or all of their income to subsistence-level items and in the process contribute to the salaries of other low-wage earners: grocery clerks and gas station attendants. In this model of "parallel economies," wealth does not "trickle down" to

minimum-wage earners; instead, funds cycle rapidly in the “poor economy” with some funds moving upwards to the “rich economy.” So, supporters argue, increasing the minimum wage increases the health of the economy overall, enabling more people to buy cars, clothing, and food from our nation’s businesses.

- 10 Another argument in support of raising the minimum wage is the large number of minimum-wage workers who are also receiving benefits from social services to fill in the gaps left by their small incomes. The Congressional Budget Office report in 2012 indicates that the lowest-income households receive about \$8,800 in annual assistance from the federal government, for a total of \$316 billion spent on social service programs annually. This assistance translates to basic food and medical care for employees of those mega-corporations that choose to pay their employees as little as possible. In essence, these corporations shift their labor costs to the taxpayers. With a higher minimum wage, supporters say, the government would experience significant relief from these payouts, and put the duty of providing a living wage on the shoulders of the employers.

Reasoning Through Language Arts, Section 3

Questions 18 through 25 are based on the following passage.

“The Wives of General Houston” From *Famous Affinities Of History: The Romance Of Devotion Volume III of IV* by Lyndon Orr

- 1 In 1828 Governor Houston was obliged to visit different portions of the state, stopping, as was the custom, to visit at the homes of “the quality,” and to be introduced to wives and daughters as well as to their sportsman sons. On one of his official journeys he met Miss Eliza Allen, a daughter of one of the “influential families” of Sumner County, on the northern border of Tennessee. He found her responsive, charming, and greatly to be admired. She was a slender type of Southern beauty, well calculated to gain the affection of a lover, and especially of one whose associations had been chiefly with the women of frontier communities.
- 2 To meet a girl who had refined tastes and wide reading, and who was at the same time graceful and full of humor, must have come as a pleasant experience to Houston. He and Miss Allen saw much of each other, and few of their friends were surprised when the word went forth that they were engaged to be married.
- 3 The marriage occurred in January, 1829. They were surrounded with friends of all classes and ranks, for Houston was the associate of Jackson and was immensely popular in his own state. He seemed to have before him a brilliant career. He had won a lovely bride to make a home for him, so that no man seemed to have more attractive prospects. What was

there which at this time interposed in some malignant way to blight his future?

- 4 It was a little more than a month after his marriage when he met a friend, and, taking him out into a strip of quiet woodland, said to him:
- 5 “I have something to tell you, but you must not ask me anything about it. My wife and I will separate before long. She will return to her father’s, while I must make my way alone.”
- 6 Houston’s friend seized him by the arm and gazed at him with horror.
- 7 “Governor,” said he, “you’re going to ruin your whole life! What reason have you for treating this young lady in such a way? What has she done that you should leave her? Or what have you done that she should leave you? Every one will fall away from you.”
- 8 Houston grimly replied:
- 9 “I have no explanation to give you. My wife has none to give you. She will not complain of me, nor shall I complain of her. It is no one’s business in the world except our own. Any interference will be impertinent, and I shall punish it with my own hand.”
- 10 “But,” said his friend, “think of it. The people at large will not allow such action. They will believe that you, who have been their idol, have descended to insult a woman. Your political career is ended. It will not be safe for you to walk the streets!”
- 11 “What difference does it make to me?” said Houston, gloomily. “What must be, must be. I tell you, as a friend, in

advance, so that you may be prepared; but the parting will take place very soon.”

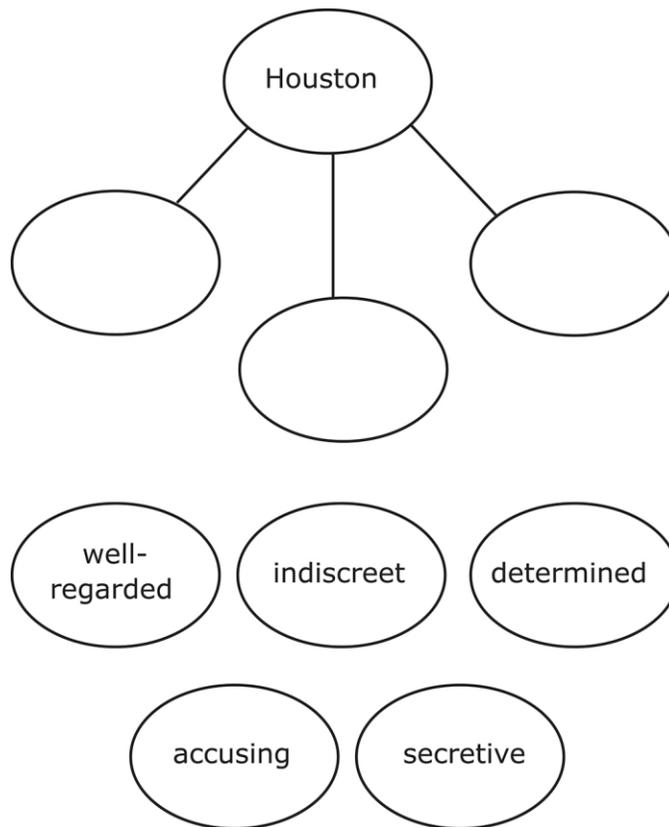
- 12 Little was heard for another month or two, and then came the announcement that the Governor’s wife had left him and had returned to her parents’ home. The news flew like wildfire, and was the theme of every tongue. Friends of Mrs. Houston begged her to tell them the meaning of the whole affair. Adherents of Houston, on the other hand, set afloat stories of his wife’s coldness and of her peevishness. The state was divided into factions; and what really concerned a very few was, as usual, made everybody’s business.
- 13 There were times when, if Houston had appeared near the dwelling of his former wife, he would have been lynched or riddled with bullets. Again, there were enemies and slanderers of his who, had they shown themselves in Nashville, would have been torn to pieces by men who hailed Houston as a hero and who believed that he could not possibly have done wrong.
- 14 However his friends might rage, and however her people might wonder and seek to pry into the secret, no satisfaction was given on either side. The abandoned wife never uttered a word of explanation. Houston was equally reticent and self-controlled. In later years he sometimes drank deeply and was loose-tongued; but never, even in his cups, could he be persuaded to say a single word about his wife.

You may take a 10-minute break before proceeding to Section 3.

18. Which definition best matches the use of the word “refined” in paragraph 2?

- A. processed, distilled
- B. purified, cleansed
- C. delicate, intricate
- D. cultivated, civilized

19. Drag and drop each word that describes Houston into the character web. (For this practice test, write each word into the web.)



20. Read the following sentences from paragraph 3.

He seemed to have before him a brilliant career. He had won a lovely bride to make a home for him, so that no man seemed to have more attractive prospects. What was there which at this time interposed in some malignant way to blight his future?

The detailed description of Houston's situation enhances the story by

- A. providing a contrast to the story development in the following paragraphs.
- B. elaborating on Houston's character with details from his life.
- C. comparing Houston to other politicians of his time.
- D. adding to the narrative by revealing the fact of Houston's marriage.

21. What can readers infer about Houston?

- A. His frequent drinking contributed to the break-up of his marriage.
- B. Unlike his wife, he was not widely read.
- C. He was loose-tongued about the details of his separation.
- D. He held public office in Tennessee.

22. Which quotation from the story supports the inference that Houston was not accustomed to "refined" society?

- A. "In 1828 Governor Houston was obliged to visit different portions of the state, stopping, as was the custom, to visit at the homes of 'the quality,' and to be introduced to wives and daughters as well as to their sportsman sons."

- B. "There were times when, if Houston had appeared near the dwelling of his former wife, he would have been lynched or riddled with bullets."
- C. "He had won a lovely bride to make a home for him, so that no man seemed to have more attractive prospects."
- D. "She was a slender type of Southern beauty, well calculated to gain the affection of a lover, and especially of one whose associations had been chiefly with the women of frontier communities."

23. In paragraph 11, Houston says, "What difference does it make to me?" What characteristic does this reveal about Houston?

- A. indifference about the consequences of the separation from his wife
- B. sadness so extreme that the loss of his career appears of little importance
- C. curiosity about the effect that the separation will have on him
- D. irritation at his friend's repeated protests

24. Why does the author use the phrase "gazed at him with horror" in paragraph 6?

- A. to illustrate how unexpected and unbelievable the news was to Houston's friend
- B. to emphasize how afraid of him Houston's friend was
- C. to inform the reader that Houston's appearance had become grotesque
- D. to show that the friend has become speechless

25. Based on the details in the story, what can readers conclude about the marriage between Houston and Eliza Allen?

- A. Only the “influential families” were present at the wedding.
- B. Because of their different backgrounds, their friends were surprised to hear of the marriage.
- C. The marriage helped Houston’s public image.
- D. Eliza Allen did not want the marriage as much as Houston did.

Questions 26 through 33 are based on the following article.

Excerpt from “How To Tell a Story” by Mark Twain

- 1 I do not claim that I can tell a story as it ought to be told. I only claim to know how a story ought to be told, for I have been almost daily in the company of the most expert story-tellers for many years.
- 2 There are several kinds of stories, but only one difficult kind—the humorous. I will talk mainly about that one. The humorous story is American, the comic story is English, the witty story is French. The humorous story depends for its effect upon the manner of the telling; the comic story and the witty story upon the matter.
- 3 The humorous story may be spun out to great length, and may wander around as much as it pleases, and arrive nowhere in particular; but the comic and witty stories must be brief and end with a point. The humorous story bubbles gently along, the others burst.
- 4 The humorous story is strictly a work of art—high and delicate art—and only an artist can tell it; but no art is necessary in telling the comic and the witty story; anybody can do it. The art of telling a humorous story—understand, I mean by word of

mouth, not print—was created in America, and has remained at home.

- 5 The humorous story is told gravely; the teller does his best to conceal the fact that he even dimly suspects that there is anything funny about it; but the teller of the comic story tells you beforehand that it is one of the funniest things he has ever heard, then tells it with eager delight, and is the first person to laugh when he gets through. And sometimes, if he has had good success, he is so glad and happy that he will repeat the “nub” of it and glance around from face to face, collecting applause, and then repeat it again. It is a pathetic thing to see.
- 6 Very often, of course, the rambling and disjointed humorous story finishes with a nub, point, snapper, or whatever you like to call it. Then the listener must be alert, for in many cases the teller will divert attention from that nub by dropping it in a carefully casual and indifferent way, with the pretense that he does not know it is a nub.
- 7 Artemus Ward used that trick a good deal; then when the belated audience presently caught the joke he would look up with innocent surprise, as if wondering what they had found to laugh at. Dan Setchell used it before him, Nye and Riley and others use it to-day.
- 8 But the teller of the comic story does not slur the nub; he shouts it at you—every time. And when he prints it, in England, France, Germany, and Italy, he italicizes it, puts some whooping exclamation-points after it, and sometimes explains it in a parenthesis. All of which is very depressing, and makes one want to renounce joking and lead a better life.

26. Drag and drop two statements that express Twain's purposes for writing the essay into the empty boxes. (For this practice test, write the statement letters in the boxes.)

Twain's Purpose

(a) To compare the techniques of storytelling from different cultures

(b) To criticize the rambling and disjointed humorous story

(c) To relate the practices of the world's most expert storytellers

(d) To satirize the habits of comic storytellers, whether writing or speaking

(e) To defend humorous and comic storytelling as a work of art

27. Read this sentence from paragraph 8.

All of which is very depressing, and makes one want to renounce joking and lead a better life.

Why does the author conclude the essay with this sentence?

- A. to show that the methods of comic storytelling are counterproductive
- B. to give insight into the mental state of the author and instill empathy in the reader
- C. to subtly criticize humorous storytelling as immoral
- D. to give an alternative to the career of a professional storyteller

28. Why does the author describe the humorous story as “difficult”?

- A. because attempting to tell a humorous story is so strenuous it can result in depression
- B. because, if done incorrectly, the audience will view the teller as pathetic
- C. because it is a form that requires patience and self-control
- D. because it takes many years of study to fully master the form

29. Which statement expresses the central theme of this essay?

- A. Humor is more a matter of style than of substance.
- B. No story is truly humorous that is not based on truth.
- C. Anybody can be humorous, as long as you tell the story with delight.
- D. Humor is a universal human characteristic, found throughout the world.

30. Drag and drop the sentences into the correct locations in the chart. (For this practice test, write the sentence letters in the boxes.)

The humorous story	The comic story

- (a) It compares the techniques of storytelling from different cultures.
- (b) It never has a point.
- (c) It is told seriously.
- (d) Anybody can tell it.
- (e) The listener must be alert at the end.
- (f) It must be brief.

31. What technique does the author use to make his point about the different types of stories?

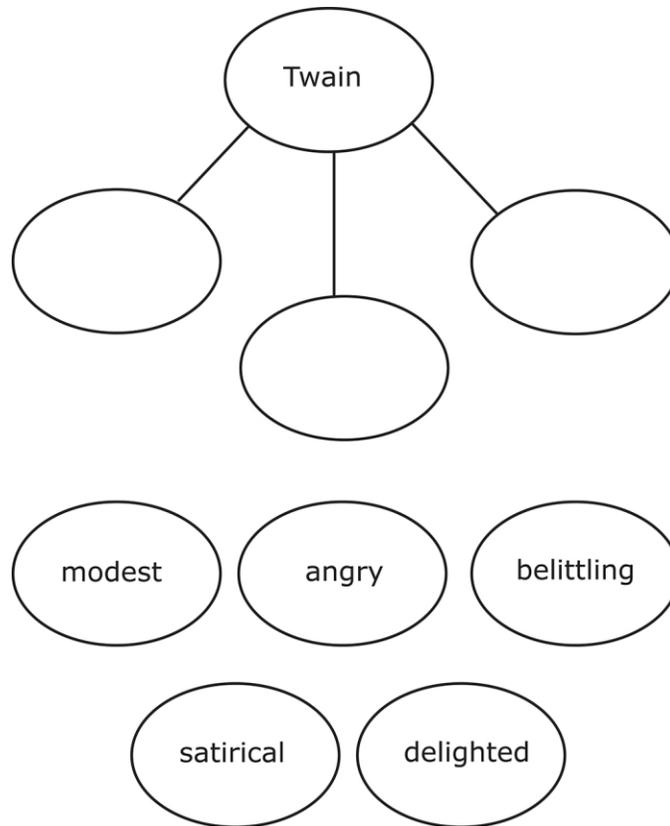
A. The author draws an analogy between the stories of America and those of England and France.

- B. The author uses exaggerated imagery to highlight a contrast between the methods of storytelling.
- C. The author cites storytelling experts from each type of story tradition.
- D. The author draws from his own history and experience with storytelling.

32. What can the reader infer about the author's feelings regarding writers and tellers of comedic stories in England, France, and Germany?

- A. The author appreciates that they go out of their way to make the story seem exciting with punctuation.
- B. The author feels they overemphasize the ending of a joke too much, so that the humor in the story is not allowed to stand on its own.
- C. The author applauds them for originating the modern comedic story form, which has taken root in America.
- D. The author is critical of them for telling a story too gravely, rambling, and never getting to the point.

33. Drag and drop each word that applies to the author into the character web. (For this practice test, write the statement letters in the boxes.)



Questions 34 through 41 are based on the following passage.

Excerpt from *Steve and the Steam Engine* by Sara Ware Bassett

- 1 The Hollow for which they were bound lay in a deserted stone quarry where a little arm of the river had penetrated the barrier of rocks and, gradually flooding the place, made at one end a deep pool; from this point the water spread itself over the meadows in a large, shallow pond. Had the spot been nearer the town it would doubtless have been overrun with skaters; but as it was isolated, and there was a larger lake near the center of the village, few persons took the trouble to seek out this remote stretch of ice.
- 2 This morning it lay desolate like a gleaming mirror, not a human being marring its solitude.

- 3 “We shall have the place all to ourselves!” exclaimed Mr. Ackerman. “There will be no spectators to watch me renew my youth, thank goodness!”
- 4 Quickly the skates were strapped on and the young people shot out into the sunshine and began to circle about. More cautiously Mr. Tolman and his guest followed.
- 5 “I wouldn’t go into the quarry,” shouted Mr. Tolman, “for I doubt if it has been cold enough yet to freeze the ice very solidly there. There are liable to be air holes where the river makes in.”
- 6 “Oh, we fellows have skated in the quarry millions of times, Dad,” Stephen protested. “It is perfectly safe.”
- 7 “There is no way of telling whether it is or not,” was the response, “so suppose for to-day we keep away from it.”
- 8 “But—”
- 9 “Oh, don’t argue, Stevie,” called Doris. “If Dad doesn’t want us to go there that’s enough, isn’t it?”
- 10 “But half the fun is making that turn around the rocks,” grumbled Stephen, in a lower tone. “I don’t see why Dad is such a fraid-cat. I know this pond better than he does and—”
- 11 “If your father says not to skate there that ought to go with you,” cut in Dick. “He doesn’t want you to—see? Whether it is safe or not has nothing to do with it.”
- 12 “But it’s so silly!” went on Stephen. “Why—”

13 “Oh, cut it out! Can it!” exclaimed the East Side lad. “Your dad says *No* and he’s the boss.”

14 The ungracious retort Steve offered was lost amid the babble of laughter that followed, and the skaters darted away up the pond. Indeed, one could not long have cherished ill humor amid such radiant surroundings. There was too much sunshine, too much sparkle in the clear air, too much jollity and happiness. Almost before he realized it Stephen’s irritation had vanished and he was speeding across the glassy surface of the ice as gay as the gayest of the company.

15 He never could explain afterward just how it happened that he found himself around the bend of the quarry and sweeping with the wind toward its farther end. He had not actually formulated the intention of slipping away from the others and invading this forbidden spot. Nevertheless, there he was alone in the tiny cove with no one in sight. What followed was all over in a moment,—the breaking ice and the plunge into the frigid water. The next he knew he was fighting with all his strength to prevent himself from being drawn beneath the jagged, crumbling edge of the hole. To clamber out was impossible, for every time he tried the thin ice would break afresh under his hands and submerge him again in the bitter cold of the moving stream. Over and over he tried to pull himself to safety but without success. Then suddenly he felt himself becoming numb and helpless. His teeth chattered and he could no longer retain his hold on the frail support that was keeping his head above water. He was slipping back into the river. *He was not going to be able to get out!*

16 With a piercing scream he made one last desperate lunge forward, and again the ice that held him broke and the water

dashed over his ears and mouth.

- 17 When he next opened his eyes it was to find himself in his own bed with a confusion of faces bending over him.
- 18 “There!” he heard some one say in a very small, far-away voice. “He is coming to himself now, thank God! It was chiefly cold and fright. He is safe now, Tolman. Don’t you worry! You’d better go and get off some of your wet clothing, or you will catch your death.”

34. Drag and drop the events into the chart to show the order in which they occur in the excerpt. (For this practice test, write the event letters in the chart.)

Order of Events



(a) The lake ice breaks.

(b) Stephen objects to his father.

(c) Stephen is at home.

(d) The quarry is deserted.

35. What can readers infer about the skating trip?

- A. Stephen deliberately planned to disobey his father by skating around the quarry.
- B. Stephen's father was the one who pulled him from the water.
- C. The quarry was deserted because it had a reputation for being unsafe.
- D. The trip was planned for the purpose of restoring Mr. Ackerman's health.

36. Which quotation from the story best supports the idea that Stephen's father is not the only adult in the skating party?

- A. "There will be no spectators to watch me renew my youth, thank goodness!"
- B. "Quickly the skates were strapped on and the young people shot out into the sunshine and began to circle about."
- C. "'If your father says not to skate there that ought to go with you,' cut in Dick."
- D. "He is safe now, Tolman. Don't you worry!"

37. Which definition best matches the use of the word "cherished" in paragraph 14?

- A. preserved
- B. embraced
- C. harbored
- D. honored

38. Based on the details in the story, what can readers tell about Dick?

- A. He is Stephen's brother, and warns Stephen to obey their father.
- B. He is the son of Mr. Ackerman, who is friends with Stephen's father.
- C. He disagrees with Stephen about whether the quarry is safe to skate around.
- D. He and Stephen have different views of parental authority.

39. Read the following sentence from paragraph 1.

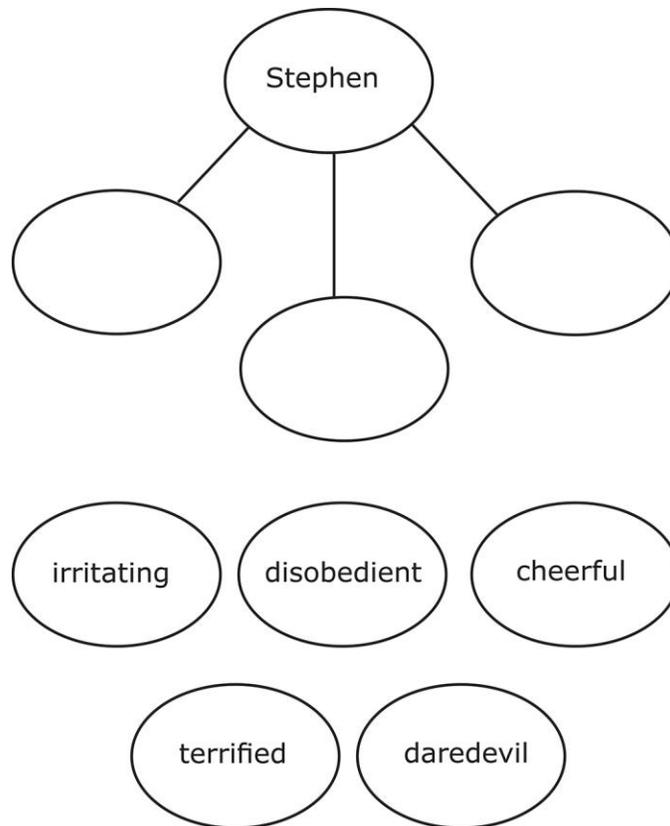
The Hollow for which they were bound lay in a deserted stone quarry where a little arm of the river had penetrated the barrier of rocks and, gradually flooding the place, made at one end a deep pool; from this point the water spread itself over the meadows in a large, shallow pond.

The detailed description of the landscape enhances the story by

- A. giving some evidence for the claim that some parts of the ice may be safer than others.
- B. establishing the geological history of The Hollow.
- C. introducing the skating area that lies near the village.

D. showing that the group had to cross a river before arriving at the skating area.

40. Drag and drop each word that describes Stephen into the character web. (For this practice test, write each word into the web.)



41. Why does the narrator use the phrase “a confusion of faces”?

- A. to show that Tolman is disoriented by the lake experience
- B. to emphasize that the people caring for Stephen are confused by his condition
- C. to represent Stephen’s mental state after the skating trip
- D. to indicate that the people Stephen sees are strangers to him

42. The passage below is incomplete. For each “Select” option, choose the option that correctly completes the sentence. (For this practice test, circle your selection.)

To: All Personnel
Billie Tanker Pipe and Supply
From: Billie Tanker
Date: March 18, 2013

Subject: Farewell to Ron Jensen

Here at Billie Tanker Pipe and Supply, we take pride in our unparalleled customer service and the unquestionable quality of our work. Though we have expanded our operations from one small storefront to a county-wide franchise, we continue to see all our workers, from truck drivers to senior management, as members of one large family. Therefore, it is with a mixed sense of pride and sadness that I congratulate Ron Jensen on his retirement.

Ron started at our company fifteen years ago and was a part of growth from making small business “housecalls” to servicing major corporations in our city. Many customers got to know Ron by name and asked for him personally when they needed an estimate. Ron’s service record is outstanding. His work one-on-one with clients and the knowledge he’s gained from a decade

and a half in the field many referrals from valued

- ▼
- earn him
- earns him
- earn them
- earns them

customers. While many of his peers went on to positions in management, Ron remained at the “front lines,” where he could “get his hands dirty” with the renovations and retrofits that he preferred to desk work.

At his retirement

to his colleague

- ▼
- party, ceremoniously, Ron will present the password for his workstation
- party Ron’s presentation of the password for his workstation will be ceremonious
- party, Ron will ceremoniously present the password for his workstation
- party, Ron’s workstation will have its password ceremoniously presented

of many years, Belle Sanchez. His coworkers will then stage a humorous “This Was Your Life” retrospective, highlighting Ron’s career successes, and relating humorous anecdotes about his adventures in engineering.

Ron plans to retain a consultant relationship with our company to best serve his

Select... ▼ long-time
colleagues and project managers and his
colleagues and project managers. His
colleagues, his project managers, and, his
colleagues, his project managers, and his

clients, providing guidance necessary to make his transition to retirement as smooth as possible for all parties. Ron will work with new technicians as they take over existing projects, to ensure our

Select... ▼ best performance.
Company,
company's
companies'
companies

Please join me in thanking Ron for his outstanding tenure of service and commending him on a successful career. All employees are invited to Ron's retirement party on Friday, at 7p.m., in the main conference room of our downtown office location: 2121 Main Street. Come wish him a happy retirement.

Questions 43 through 50 refer to the following articles.

Addresses and Proceedings of the Second National Conservation Congress

Held At Saint Paul, Minnesota

September 5–8, 1910

Article 1: Address by the President of the United States by President William Howard Taft

- 1 We have, then, excluding Alaskan forests, a total of about 144,000,000 acres of forests belonging to the Government, which are being treated in accord with the principles of scientific forestry. The law now prohibits the reservation of any more forest lands in Oregon, Washington, Idaho, Montana, Colorado and Wyoming, except by act of Congress. I am informed by the Department of Agriculture that the Government owns other tracts of timber lands in these States which should be included in the forest reserves. I expect to recommend to Congress that the limitation herein imposed shall be repealed. In the present forest reserves there are lands which are not properly forest land, and which ought to be subject to homestead entry. We are carefully eliminating such lands from forest reserves or, where their elimination is not practicable, listing them for entry under the forest homestead act.
- 2 The Government timber in this country amounts to only one-fourth of all the timber, the rest being in private ownership. Only three percent of that which is in private ownership is looked after properly and treated according to modern rules of forestry. The usual destructive waste and neglect continue in the remainder of the forests owned by private persons and corporations. It is estimated that fire alone destroys \$50,000,000 worth of timber a year. The management of forests not on public land is beyond the jurisdiction of the Federal Government. If anything can be done by law, it must be done by the State legislatures. I believe that it is within their constitutional power to require the enforcement of regulations, in the general public interest, as to fire and other causes of

waste in the management of forests owned by private individuals and corporations.

- 3 Exactly how far these regulations can go and remain consistent with the rights of private ownership, it is not necessary to discuss; but I call attention to the fact that a very important part of Conservation must always fall upon the State legislatures, and that they would better be up and doing if they would save the waste and denudation and destruction through private greed or accidental fires that have made barren many square miles of the older States.
- 4 I have shown sufficiently the conditions as to Federal forestry to indicate that no further legislation is needed at the moment except an increase in the fire protection to National forests and an act vesting the Executive with full power to make forest reservations in every State where Government land is timber-covered, or where the land is needed for forestry purposes.

Article 2: Report of the Western Forestry and Conservation Association by E. T. Allen, Forester

- 5 Let us not, during excursions into Constitutional problems, State rights, and other bewildering issues, forget that first of all comes protection from destruction and waste! The great danger now is that our resources will disappear while we are deciding to whom they shall belong.
- 6 In our five States from Montana to California stands half the merchantable timber in the United States, the majority in private hands. To preserve it for the fullest use, to replace it when used, if possible—this is the timber-owner's duty. Nowhere else has he realized this so promptly and acted so adequately as in the Pacific Northwest.

- 7 You have all read of the recent fires in our northwestern country. They have been greatly exaggerated, the area injured really being very limited. Nevertheless, while we talk here of generalities, bands of weary, half-blind men are still battling to prevent fresh outbreaks; the smoke still curls over the blackened forms of those who met a fearful death to save the lives of others; scores who fought till they could fight no more still lie bandaged and sightless in the extremity of mortal agony. We of the West owe a sacred debt to them, one and all, and not least to the men of the Forest Service whose training made them as efficient as they were brave. But side by side with the bravest, equally efficient, equally trained and disciplined, worked the patrolmen of our fire associations. Conservationists are employed by private effort. In the Coeur d'Alene fires alone, a single one of our Associations put 850 men in the field.
- 8 The way to prevent fire is to prevent it, not fight it when almost or quite beyond control. The only solution of the fire question is better enforcement of better laws, better public sentiment, and better patrol. It is in this that our Associations now lead all other agencies. They handle the fire situation in a much better and more comprehensive manner than even the Government has ever done, because they spend three times as much money per acre for patrol. Thoroughly excellent as are the methods in the National Forests—they are identical with those of the most progressive practical timberman—Congress does not sustain them adequately.
- 9 Our own system is by no means perfect yet. We need more men and more money from our own brethren, and heartier cooperation from public, State, and Government. And when, as already in Washington last year, one Association protects 8,000,000 acres with a loss of but 1,000 acres; when this small

loss was caused by less than 6 fires out of 1,200 extinguished; when in this historic year of 1910 we have controlled our countless fires so that actual disasters can be counted on the fingers, and our loss as a whole is insignificant—we feel that no one has done more to prove his willingness and competence to practice Conservation that counts than the northwestern forest owner.

43. President Taft mentioned the fraction of timber owned by public organizations in order to

- A. show that waste and neglect of forests is mostly due to private owners.
- B. emphasize that not enough forested land was designated for public use.
- C. support the idea that some lands are not properly forest lands, and should be re-categorized.
- D. prove that federal laws about management of forests not on public land should not be enacted because the fraction is so small.

44. What approach did the author of the report by the Western Forestry and Conservation Association take to support the idea that northwestern forest owners have effective conservation practices?

- A. The author explored several different definitions of “conservation” and evaluated them.
- B. The author offered statistics to illustrate the effectiveness of the private associations in protecting private forest lands.
- C. The author compared the number of Forest Service members to the number of members in fire patrols of the private associations.

D. The author offered a critique of the government's conservation methods.

45. Read this quotation from the report:

“...we feel that no one has done more to prove his willingness and competence to practice Conservation that counts than the northwestern forest owner.”

Why does E. T. Allen, in responding to President Taft, conclude the report with this sentence?

- A. to counter the idea that private owners of forested lands are guilty of waste and neglect
- B. to clearly define the kind of Conservation “that counts”
- C. to prove that Congress does not adequately maintain the forested lands
- D. to show that the private owners can protect their forested lands without further laws

46. Drag and drop the phrases into the correct location on the chart. (For this practice test, write the phrase letters in the chart.)

President Taft's Address

E. T. Allen's Report

(a) There are lands which should be removed from the forest reserves.

(b) States should make laws for fire safety.

(c) Private fire patrols are more costly per acre than National Forest patrols.

(d) The private Northwest forest owners have an imperfect fire safety system.

47. How does Article 1 (the president's address) relate to Article 2 (the excerpt of the report by E. T. Allen)?

- A. The president's address mentions the limitations on national reserved forests, and the report by E. T. Allen defends these limitations.
- B. The president's address calls for more laws regarding fire safety, and the report by E. T. Allen denies the necessity of such laws.
- C. The report by E. T. Allen calls for laws to enforce fire safety, while the president's address discusses how those laws impact property rights.
- D. The president's speech spends equal time on the classification of forests and problems of regulation, while the report by E. T. Allen gives priority to the details of forest protection.

48. Based on Article 1, what was President Taft's attitude about laws regarding the regulation of forested lands?

- A. No further legislation is currently needed.

- B. The states do not have constitutional power to require the enforcement of such regulations.
- C. The laws regarding limitations on forested reserves should remain.
- D. The federal government should not make laws about forests that are not public.

49. Which quotation expresses the primary purpose of President Taft's address?

- A. "I call attention to the fact that a very important part of Conservation must always fall upon the State legislatures."
- B. "We have, then, excluding Alaskan forests, a total of about 144,000,000 acres of forests belonging to the Government, which are being treated in accord with the principles of scientific forestry."
- C. "The usual destructive waste and neglect continue in the remainder of the forests owned by private persons and corporations."
- D. "No further legislation is needed at the moment except an increase in the fire protection to National forests and an act vesting the Executive with full power to make forest reservations."

50. What can readers infer about the forest homestead act?

- A. The act was passed to make sure pioneers could have homesteads in the forests.
- B. The act was passed to reallocate the forest lands that had been restricted in the northwest states.
- C. The act provided another way of categorizing government forest lands that had been assigned to the forest reserve.
- D. The act applied to one-fourth of the timber in the country.

Mathematical Reasoning

Welcome!

Here is some information that you need to know before you start this test:

- You should not spend too much time on a question if you are not certain of the answer; answer it the best you can, and go on to the next question.
- If you are not certain of the answer to a question, you can mark your answer for review and come back to it later.
- You have **115 minutes** to complete this test.
- This test has two parts.
- When you finish Part 1, you may review those questions.
- You may not go back to Part 1 once you have finished your review.
- You may not use a calculator in Part 1. You may use a calculator in Part 2.

Turn the page to begin.

Mathematics Formula Sheet

Area of a:

square	$A = s^2$
rectangle	$A = lw$
parallelogram	$A = bh$
triangle	$A = \frac{1}{2}bh$
trapezoid	$A = \frac{1}{2}h(b_1 + b_2)$
circle	$A = \pi r^2$

Perimeter of a:

square	$P = 4s$
rectangle	$P = 2l + 2w$
triangle	$P = s_1 + s_2 + s_3$
Circumference of a circle	$C = 2\pi r$ OR $C = \pi d$; $\pi \approx 3.14$

Surface Area and Volume of a:

rectangular prism	$SA = 2lw + 2lh + 2wh$	$V = lwh$
right prism	$SA = ph + 2B$	$V = Bh$
cylinder	$SA = 2\pi rh + 2\pi r^2$	$V = \pi r^2 h$
pyramid	$SA = \frac{1}{2}ps + B$	$V = \frac{1}{3}Bh$
cone	$SA = \pi rs + \pi r^2$	$V = \frac{1}{3}\pi r^2 h$
sphere	$SA = 4\pi r^2$	$V = \frac{4}{3}\pi r^3$

(p = perimeter of base B ; $\pi \approx 3.14$)

Data

mean	mean is equal to the total of the values of a data set, divided by the number of elements in the data set
median	median is the middle value in an odd number of ordered values of a data set, or the mean of the two middle values in an even number of ordered values in a data set

Algebra

slope of a line	$m = \frac{Y_2 - Y_1}{X_2 - X_1}$
slope-intercept form of the equation of a line	$y = mx + b$
point-slope form of the equation of a line	$y - y_1 = m(x - x_1)$
standard form of a quadratic equation	$y = ax^2 + bx + c$
quadratic formula	$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$
Pythagorean Theorem	$a^2 + b^2 = c^2$
simple interest	$I = prt$ (I = interest, p = principal, r = rate, t = time)
distance formula	$d = rt$
total cost	total cost = (number of units) \times (price per unit)

Mathematical Reasoning, Part 1

You may NOT use a calculator in Part 1.

1. The Great Pyramid in Egypt has a height of approximately 150 meters and a base of 50,000 square meters. In cubic meters, what is its approximate internal volume?

- A. 7,500,000
- B. 5,000,000
- C. 2,500,000
- D. 750,000

2. If a woman sleeps only 6 hours per night and spends $\frac{4}{9}$ of her waking hours at work, then what fraction of the total 24-hour day (on a work day) is the woman at work?

- A. $\frac{1}{9}$
- B. $\frac{1}{3}$
- C. $\frac{4}{9}$
- D. $\frac{3}{4}$

3. A class with 87 students has an average test score of 76 points. The number of students who scored above the average score is less than the number of students who scored below the

average test score. Only 1 student scored exactly 76 points. It

follows that the median student score

Select...	▼
<	
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>	
>	

76.

4. A moving company charges \$50 per hour for each person working, plus an additional \$0.50 per mile driven. If Fritz hires 3 movers for 2 hours of work apiece and the total distance driven is 40 miles, which of the following represents the equation for his total cost?

A. $\$50 \times 3 + 40 \times (\$0.50) \times 2$

B. $\frac{\$50 \times 3}{2} + 40 \times (\$0.50)$

C. $\$50 \times 3 \times 2 + 40 \times (\$0.50)$

D. $\$50 \times 3 \times 2 + \frac{40}{(\$0.50)}$

5. Mindy invested \$500 in a savings account. After one year, her account balance was \$515. What percent yearly interest did her bank pay?

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Mathematical Reasoning, Part 2

You may NOT use a calculator in Part 1.

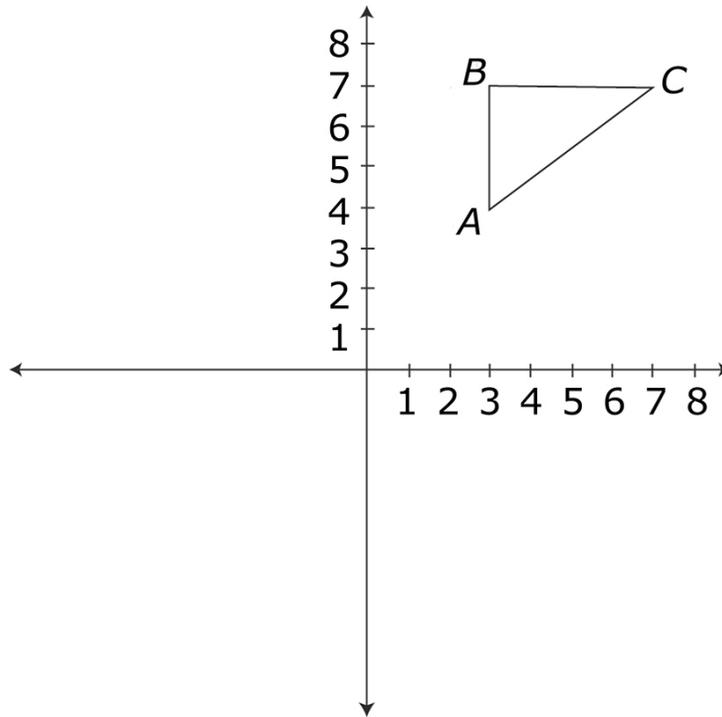
6. By law, a bus driver may drive a maximum of 9 hours per day. If the speed limit is 65 miles per hour and if a driver needs to cover 4,287 miles, then what is the minimum number of days in which the driver can make the trip?

- A. 7
- B. 8
- C. 25
- D. 66

7. Zarbini's gourmet grocery buys pickles in barrels that are 4 feet tall and measure 24 inches in diameter. What is the approximate volume (in cubic feet) of pickles that will fill a barrel with these dimensions?

- A. 4
- B. 12.6
- C. 25.2
- D. 150.7

Questions 8 and 9 refer to the following diagram.



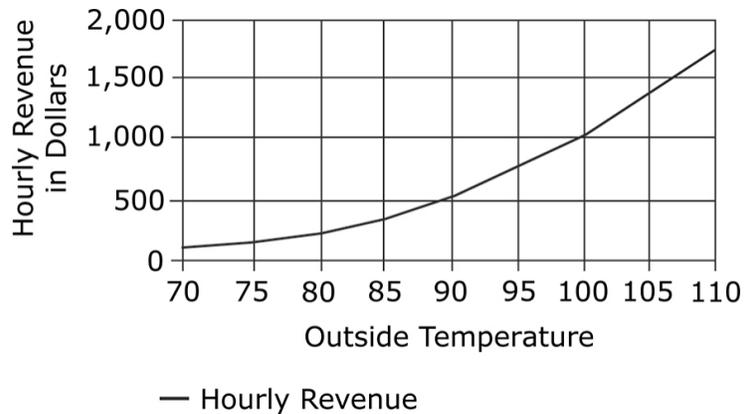
8. The sum of the lengths of line segments AB and BC is

Select...	▼	the length of line segment AC .
greater than		
less than		
equal to		
equal to the square of		

9. What is the difference between the numerical values of the area of the triangle and the length of the hypotenuse of the triangle?

- A. 1
- B. 5
- C. 6
- D. 7

Questions 10 and 11 refer to the following graph.



10. A shaved ice stand located near a beach records its hourly revenue as well as the temperature outside, as shown on the graph above. Approximately how much more revenue would be expected during a 3-hour shift with a temperature of 100° than at a shift of the same duration with a temperature of 90° ?

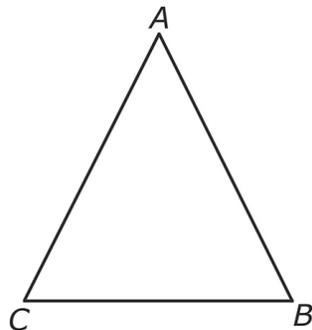
- A. \$150
- B. \$500
- C. \$750
- D. \$1,500

11. The owner of the shaved ice stand institutes a policy to close the stand on any day on which the average revenue is likely to fall below \$250 per hour as predicted by the graph. On a given day, the temperature at the beginning of the shift is 70° and the temperature is expected to rise at a constant rate to 95° . Should the owner close the ice stand?

- A. No, because the average temperature during the day will be greater than 80° , so the stand is likely to make more than \$250 per hour.
- B. No, because the sum of the revenue at the beginning of the day and the revenue at the end of the day will be more than \$250 per hour.

- C. Yes, because the midpoint between the revenue at the beginning of the day and the revenue at the end of the day is less than \$250 per hour.
- D. Yes, because for at least half the day, the stand will be bringing in less than \$250 per hour.

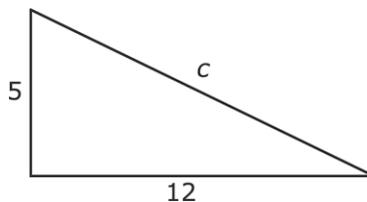
Question 12 refers to the following diagram.



12. For the triangle shown in the diagram above, both angle A and angle C measure 60° . If side AB has a length of 4 inches, what is the sum (in inches) of sides AC and BC ?

- A. 12
B. 10
C. 8
D. 6

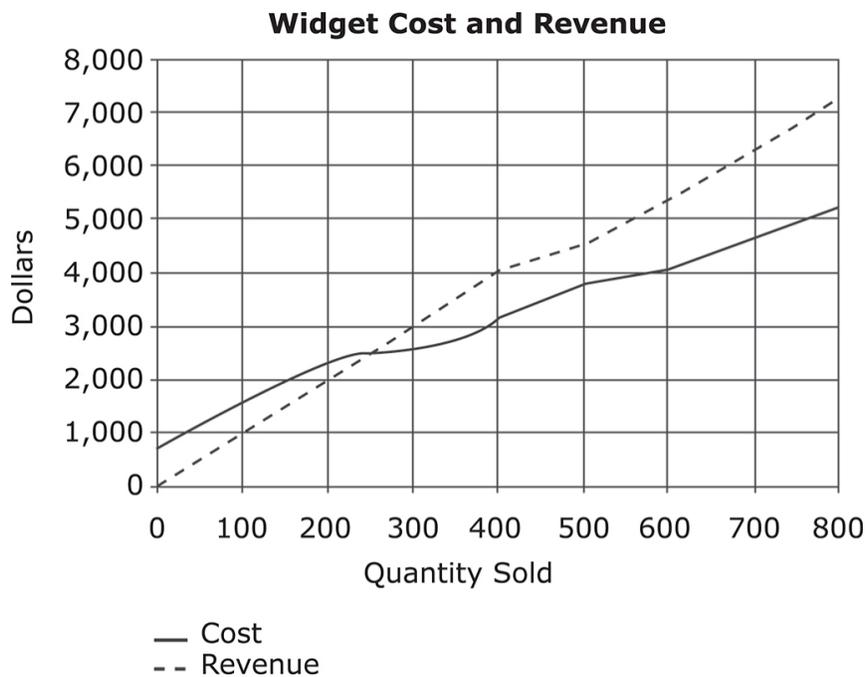
Question 13 refers to the following diagram.



13. A triangular loading ramp has the dimensions shown in the figure above (in feet). Side c is the length. If a new ramp is made for a dock that is twice as high off the ground as the one with length c but with the same incline, what will the new ramp's length be (in feet)?

- A. 6.5
- B. 13
- C. 17
- D. 26

Questions 14 and 15 refer to the following graph.

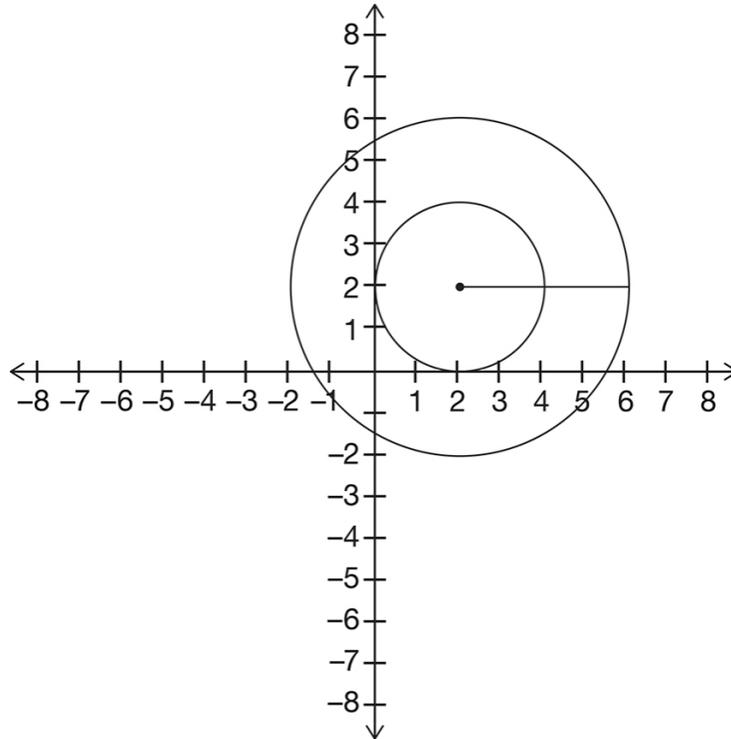


14. Indicate on the revenue line the minimum number of widgets that must be sold in order to avoid losing money. (For this practice test, write an X on the revenue line.)

15. Indicate on the revenue line the quantity sold for which the profit will be \$2,000. (For this practice test, write an X on the

revenue line.)

Questions 16 and 17 refer to the following graph.



16. The larger circle has the diameter and

twice
three times
four times

the area of the smaller circle.

twice
four times
eight times

17. If a represents the point on the larger circle with the greatest y -value, and if b represents the point on the smaller circle with the least y -value, then what is the distance from point a to point b ?

- A. 2
- B. 4
- C. 6
- D. 8

18. If a plane travels at 280 miles per hour, how many miles will it travel in 12 minutes?

- A. 56
- B. 45
- C. 36
- D. 28

19. A can of fruit weighs w ounces. The fruit itself, without the can, weighs f ounces. Which equation can be used to find C , the weight of the empty can?

- A. $C = w + f$
- B. $C = w - f$
- C. $C = f - w$
- D. $C = f$

20. A square has sides that measure 5 inches. The square is then divided in half vertically and horizontally, creating 4 smaller squares. What would the total perimeter of the 4 smaller squares be (in inches)?

- A. 5
- B. 6.25
- C. 25
- D. 40

21. If $\frac{1}{5}$ of $x = 15$, what is $\frac{4}{3}$ of x ?

- A. 4
- B. 25
- C. 75
- D. 100

22. A jar of marbles contains two sizes of marbles: normal and jumbo. There are 84 normal size marbles. If $\frac{2}{9}$ of the marbles are jumbo size, then how many marbles total are in the jar?

- A. 19
- B. 103
- C. 108
- D. 378

23. For her first 3 years with a company, Marissa earned \$45,200 each year. For the next 5 years she earned \$55,400 per year. What was the average amount that Marissa earned per year over the 8-year period?

- A. \$49,075
- B. \$50,300
- C. \$51,575
- D. \$52,100

24. To rent a convention hall costs a \$400 base fee, plus an additional \$5 per attendee. If x legionnaires are attending an event, which of the following equations indicates (in dollars) the average cost per legionnaire C of renting the hall?

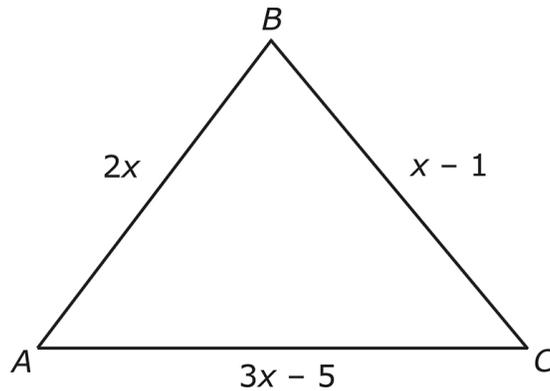
A. $C = 400 + 5x$

B. $C = \frac{400 + 5x}{x}$

C. $C = \frac{400 + 5x}{5}$

D. $C = \frac{400 + 5x}{400}$

Questions 25 and 26 refer to the following diagram.



25. In the figure above, if the perimeter of triangle ABC is 27, what is the value of x ?

26. Given that the perimeter of the triangle is 27, indicate below the correct relationship among the 3 angles of the triangle. (For this practice test, circle your selections.)

Select...	▼
A	
B	
C	

 <

Select...	▼
A	
B	
C	

 <

Select...	▼
A	
B	
C	

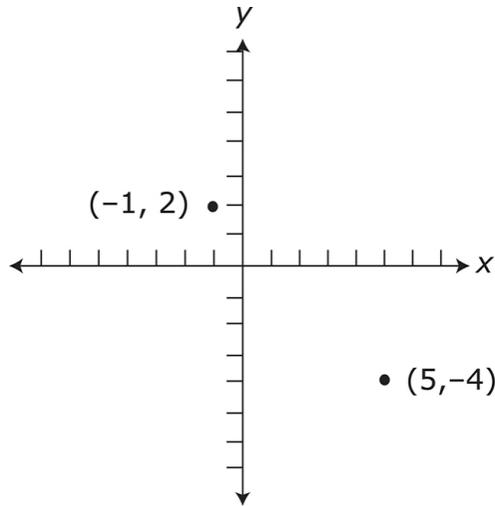
27. A farmer purchases 200 lbs. of feed each month to support 35 cows. How much total feed (in lbs.) will he need per month, at this rate, if he acquires an additional 245 cows?

- A. 43
- B. 243
- C. 1,400
- D. 1,600

28. To rent a community center for a school prom costs a base fee of \$550 and an additional fee of \$6 per person in attendance. The organizers expected 350 attendees, but in fact a total of 377 people attended. How much greater was the actual fee than the fee the organizers had expected to pay?

- A. \$162
- B. \$712
- C. \$2,262
- D. \$2,812

Questions 29 and 30 refer to the following coordinate axis.



29. What are the coordinates of the midpoint of the two points shown on the coordinate axis above?

- A. $(2, -1)$
- B. $(3, -3)$
- C. $(3, -1)$
- D. $(2, -2)$

30. Which of the following equations represents the line that passes through the two given points?

- A. $y = 2x - 14$
- B. $y = 2x + 3$
- C. $y = -x - 1$
- D. $y = -x + 1$

31. At a law firm, new associates earn an average of \$2,800 more per month than new paralegals do. The firm employs 15 new associates and z more new associates than new paralegals. If the average pay for a new paralegal is represented by p , then use numbers and variables from the figure bank to indicate the correct equation for the total monthly payroll of these new

employees. (For this practice test, write the figures in the boxes.)

$$Total = (\square \times (\square + p)) + ((15 - \square) \times \square)$$

p

12

z

2,800

15

32. The scale on a map of the Moon's surface indicates that 0.4 inches = 100 miles. Sen wants to know the distance between two large craters. If on the map, the distance between the two craters is 7.4 inches, then what is the actual distance, in miles, between the two craters?

- A. 74 miles
- B. 296 miles
- C. 1,850 miles
- D. 2,960 miles

Questions 33 through 35 refer to the following table.

--

Migration Sightings			
Bird Type	2008	2009	2010
Cardinal	24	31	
Finch	40	37	
Grosbeak	19	23	
Harrier	31	38	
Sparrow	28	24	

33. Choose from the figure box below to indicate the correct relationship among the three types of birds that showed an increase in the number of sightings from 2008 to 2009. The bird types are to be ordered from least percent increase in sightings to greatest percent increase in sightings. (For this practice test, circle your selections.)

% increase of

Select...	▼
Cardinal	
Finch	
Grosbeak	
Harrier	
Sparrow	

< % increase of

Select...	▼
Cardinal	
Finch	
Grosbeak	
Harrier	
Sparrow	

< % increase of

Select...	▼
Cardinal	
Finch	
Grosbeak	
Harrier	
Sparrow	

34. Considering only these 5 bird types, what was the total percentage increase in sightings from 2008 to 2009? (Round your answer to the nearest integer.)

- A. 7%
- B. 8%
- C. 14%
- D. 18%

35. Assume that in 2010, the number of new sightings for each bird type increased or decreased by the same amounts they had from 2008 to 2009. Select the appropriate sightings numbers from the figure box below to complete the 2010 column of the chart. (For this practice test, write the figures in the boxes. Not all of the numbers will be used, but all of the empty boxes should be filled).

20

26

27

30

33

34

38

45

36. One year ago, Harold invested \$24,000 in a bank bond that offers 3% annual interest. At the same time, Maude invested $\frac{1}{3}$ that amount in a fund that produced an annual yield of 8%. At the end of the year, what was the difference between Harold's interest earnings and Maude's gains from her investment yield?

- A. \$80
- B. \$240
- C. \$640
- D. \$5,040

37. Each number below is a possible solution for $2x^2 - 3 \leq 15 - x$ EXCEPT

- A. -3
- B. 0

- C. 1
- D. 3

38. A pizza store sells two sizes of pizzas, one with a circumference of 22π inches and a larger one with a circumference of 27π inches. Each pizza is cut from edge to center into 8 identical slices and the length of the smaller slice (measured along the edge from the tip to the end of the crust) is compared to the length of the larger slice. How much longer, in inches, is the edge of the larger pizza slice?

- A. 2.5
- B. 3
- C. 5
- D. 5π

39. 384 conference attendees need to take tour shuttles into the city. If each bus can carry a maximum of 26 passengers, then what is the minimum number of shuttle trips required to transport all the passengers?

40. A small copy shop spent 24% of its monthly revenue on supplies, 17% on renting the building, and 33% on payroll and taxes. If after paying these expenses, \$7,384 dollars in profit is left, then how much did the copy shop spend on rent?

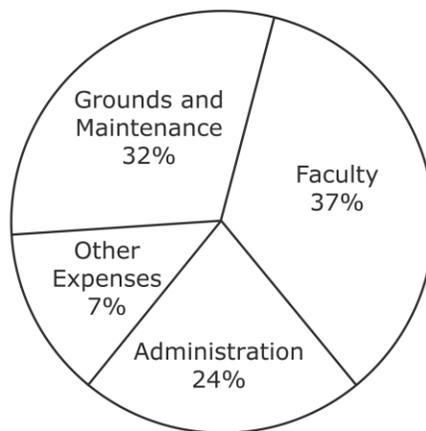
- A. \$3,976
- B. \$4,828
- C. \$19,198
- D. \$28,400

41. If $x^2 - x = 12$, then which of the following could be the value of x^2 ?

- A. 1
- B. 9
- C. 36
- D. 144

Questions 42 and 43 refer to the following pie chart.

**2012 Allocation of Endowment Funds
for University X**



42. If the total income from the endowment in 2012 was \$1.2 million, then how much more money went to Faculty salaries than to Administration?

- A. \$130,000
- B. \$156,000
- C. \$180,000
- D. \$684,000

43. If in 2013, the income from the endowment increases from \$1.2 million to \$1.6 million, and the percentage distribution remains

constant, then by how much will the funds available for Other Expenses increase? (Enter your result in dollars.)

44. Currently a sports league has 33 teams with 24 players each. If the membership of each team is going to be reduced to 18 players, then how many additional teams will need to be formed to include all the remaining players?

45. If the equations of two lines are given by $y = -28x - 4$ and $y = 2x + 11$, then at which of the following points do the two lines intersect?

A. $\left(-\frac{9}{2}, 2\right)$

B. $(2, 15)$

C. $\left(-\frac{1}{2}, 10\right)$

D. $(-26, 7)$

46. A bell rings every 2 hours. A second bell rings every 3 hours. A third bell rings every 4 hours. If all three bells ring at 9:00 a.m., when will all three bells ring again?

A. 12:00 p.m.

B. 2:00 p.m.

C. 6:00 p.m.

D. 9:00 p.m.

Social Studies

Welcome!

Here is some information that you need to know before you start this test:

- You should not spend too much time on a question if you are not certain of the answer; answer it the best you can, and go on to the next question.
- If you are not certain of the answer to a question, you can mark your answer for review and come back to it later.
- You have **70 minutes** to complete this test.

Turn the page to begin.

Questions 1 and 2 refer to the following interpretation of the U.S. Constitution.

The first ten amendments to the U.S. Constitution are called the Bill of Rights. They were originally added to grant both individual citizens and states certain rights that could not be violated by the federal government. The 14th Amendment, which was adopted in 1868 as part of the settlement of the Civil War, widened the applications of the Bill of Rights. One sentence of this amendment states: “No state shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any state deprive any person of life, liberty or property, without due process of law, nor deny to any person...equal protection under the law.”

This amendment has since been interpreted as protecting the individual citizen’s rights from encroachment by the states.

1. Which of the following descriptions of the authors of the amendments to the Constitution is supported by the passage?
- A. They were legal scholars.
 - B. They believed that the government and the church should be united.
 - C. They believed that the best type of government would have ultimate authority.
 - D. They were wary of giving the government too much power over individual rights.

2. All of the following actions by a particular state would violate the 14th Amendment EXCEPT

- A. a zoning law prohibiting naturalized citizens from operating ethnic restaurants.
- B. legislation requiring citizens to pay taxes regardless of their beliefs.
- C. a bill requiring children of citizens of a particular ethnic origin to attend separate public schools.
- D. sentencing a person accused of murder without a trial.

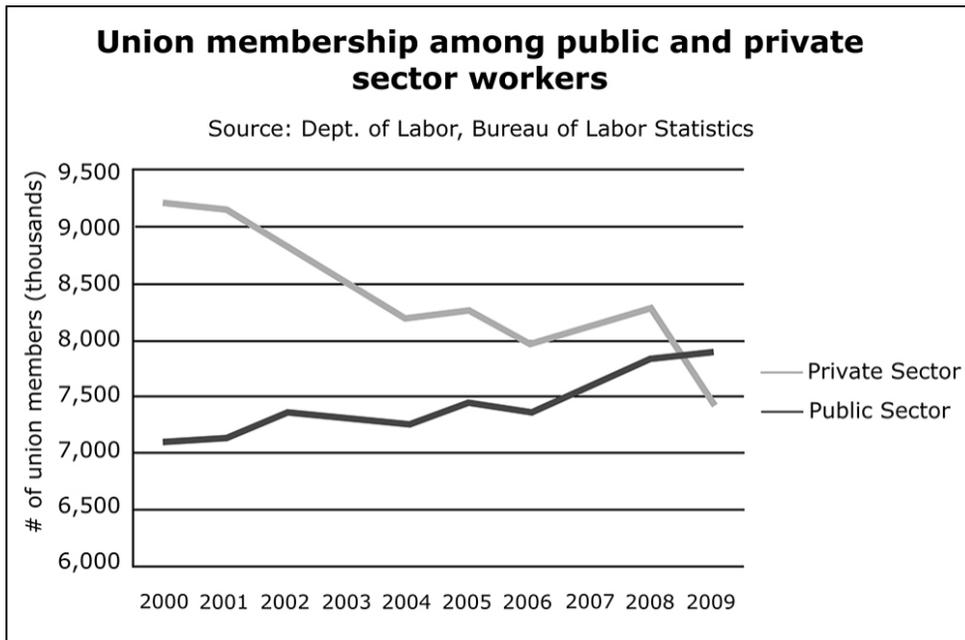
Question 3 refers to the following statement about Amelia Earhart.

When Amelia Earhart made her first successful trip across the Atlantic with her colleague, Captain Manning, she was greeted on arrival by the mayor of Southampton in England. Despite most of the favorable reactions of the press to her accomplishment, one of the London papers stated that she was “a pleasant young woman who should be capable of spending her time to better advantage in domestic pursuits.” Many members of the American press characterized her as a “foolhardy girl” and as a publicity seeker. Perhaps as a result, Earhart resolved to tackle her next mission alone.

3. In the author’s opinion, what factor contributed to Amelia Earhart’s decision to fly alone?

- A. a love of her country
- B. the public’s ignorance of aviation
- C. the patriotism of the British
- D. a lack of respect by some members of the press for women’s abilities

Question 4 refers to the following chart.



4. Determine whether or not each statement below is supported by the information in the graph. Drag the statements into the “Yes” box if so and the “No” box if not. (For this practice test, write the statement letters in the correct boxes.)

Yes

No

--	--

(a) “There were about 7,500,000 public sector union members in 2007.”

(b) “There were about 9,000,000 private sector employees in 2002.”

(c) “There was an increase in both private and public sector union membership from 2006 to 2008.”

(d) “For the years shown, the number of public sector employees peaked in 2009.”

(e) “Combined union membership in both public and private sectors generally decreased from 2000 to 2009.”

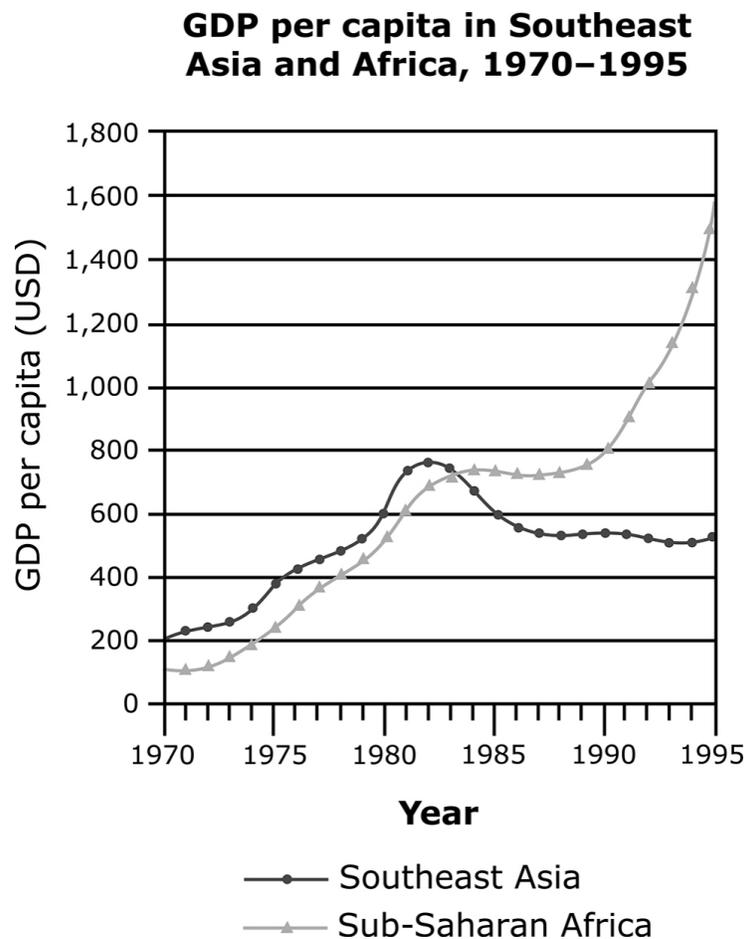
Question 5 refers to the following chart.



5. The information in the chart supports the conclusion that from 1988 to 2006 there has been

- A. an increase in agricultural jobs.
- B. more growth in administrative support jobs than in any other occupation.
- C. more growth in administrative support jobs than in services and technicians and support jobs combined.
- D. less growth in precision production than in professional specialties.

Question 6 refers to the following chart.



GDP, or Gross Domestic Product, per capita is the average value of the goods and services produced by the citizens of a country in a year. Economists use GDP to compare wealth between individuals and nations.

6. Based on this information, which statement is an OPINION, rather than a fact, about the GDP per capita of these nations?

- A. The GDP per capita for Southeast Asia increased substantially during the years given in the graph.
- B. The GDP per capita of Southeast Asia was higher than that of Sub-Saharan Africa in 1995.
- C. Sub-Saharan Africa is in desperate need of foreign aid in order to sustain its economy.
- D. For many years, Southeast Asia and Sub-Saharan Africa had similar patterns of economic growth.

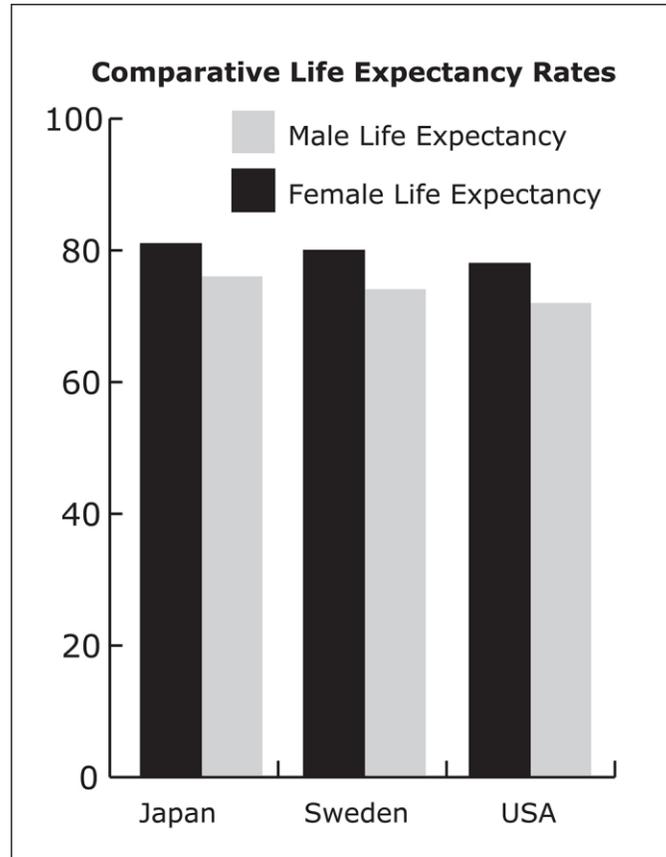
7. President John Quincy Adams wrote that “the whole continent of North America appears to be destined by Divine Providence to be peopled by one nation, speaking one language, professing one general system of religious and political principles, and accustomed to one general tenor of social usages and customs. For the common happiness of them all, for their peace and prosperity, I believe it is indispensable that they should be associated in one federal Union.”

The idea that the United States was destined and divinely ordained by God to expand across the entire North American continent is called

- A. Manifest Destiny.
- B. capitalism.
- C. imperialism.

D. eminent domain.

Questions 8 and 9 refer to the following graph.



8. According to the above graph, a member of which of the following groups is likely to have the shortest life span?

- A. Japanese females
- B. Swedish females
- C. American males
- D. Japanese males

9. Which statement is the most likely explanation for the differences in life expectancy shown in the graph?

- A. Asian males tend to work more hours per week than do males from other countries.
- B. Life expectancy is higher in North American countries.
- C. Japan provides free or low-cost health care for all Japanese citizens.
- D. There are fewer natural disasters in Japan than there are in other parts of the world.

Questions 10 through 12 refer to the following interpretation of the role of immigrants in American society.

The society of the United States, perhaps more than that of any other country, is a “melting pot” society. America is a nation of immigrants and is reputed to be a haven for the oppressed and a land of equal opportunity for all. Symbols such as the Statue of Liberty and rags-to-riches success literature reinforce this reputation. Immigrants to the United States come in search of new opportunities, increased social mobility, and an environment free from political unrest and oppression.

On the other hand, America is not free from bigotry. In the past, each new immigrant group has been greeted with prejudice and discrimination by the groups that settled before them.

There have been many steps taken in recent history to make American society as free and equal as our founders had intended. There has been much legislation passed over the last three decades to help to ensure the equal treatment of all individuals and groups. With this legislation and improved public awareness, perhaps American society can live up to its “melting pot” image.

10. Which of the following observations about immigration to the United States is supported by the article?

- A. Americans are always friendly to every group of people making a new home here.
- B. Immigrants come to the United States expecting not to find jobs.
- C. The United States wants to shed its reputation as a “melting pot” society.
- D. Efforts have been made to ensure that America is receptive to immigrants.

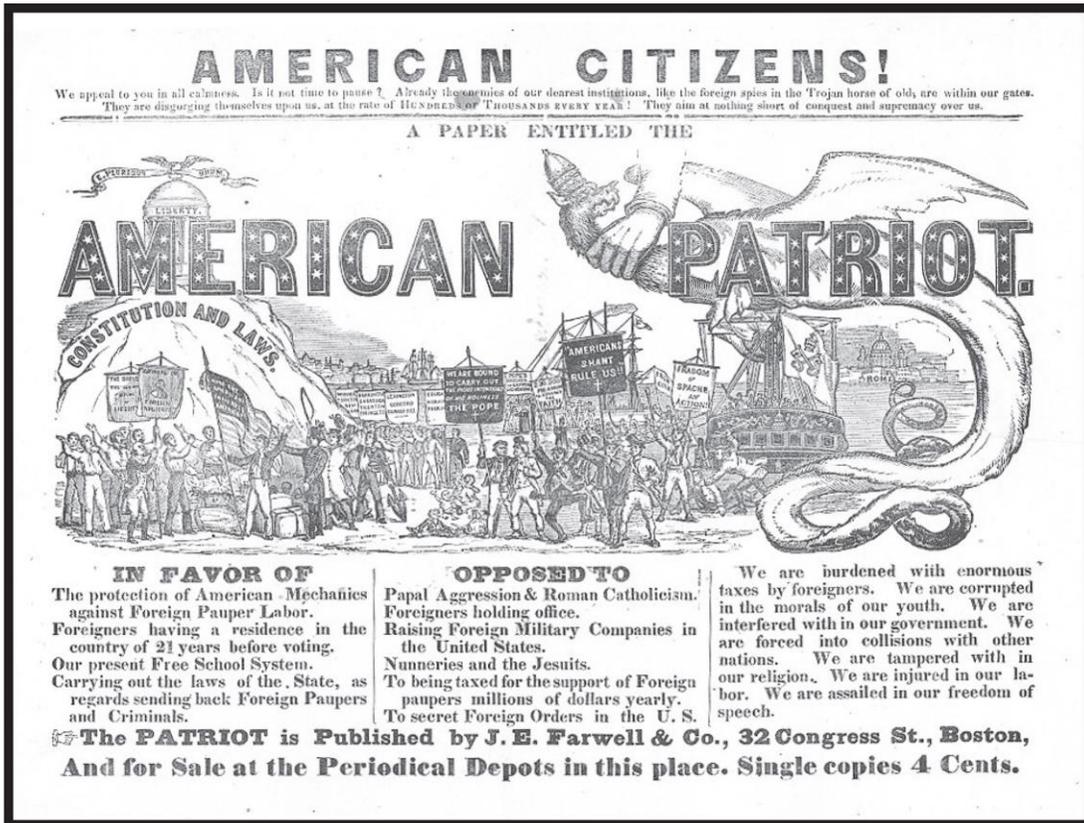
11. According to the article, people immigrate to the United States because

- A. the United States offers political stability and economic opportunity.
- B. there is a shortage of available land in their countries.
- C. American society discourages social mobility.
- D. they do not experience political unrest and oppression in their home countries.

12. Which of the following statements is NOT directly supported by the article?

- A. There are steps being taken to decrease the amount of bigotry in the United States.
- B. People have immigrated to the United States because they were unhappy with life in other countries.
- C. People have immigrated to the United States because of the possibility of new opportunities and social mobility.
- D. Immigrants make more money after coming to America.

Question 13 refers to the following photo.



13. This 1852 advertisement expresses opposition to “foreign pauper labor” and “foreigners holding office.” With which of the following policies would the writer of this advertisement be likely to disagree?

- A. a trade embargo to keep cheap foreign goods out of the United States
- B. a new law that prevents immigration unless the immigrant is rich
- C. a voter registration drive that targets only American-born persons
- D. a constitutional amendment giving new immigrants voting rights

Question 14 refers to the following sources.

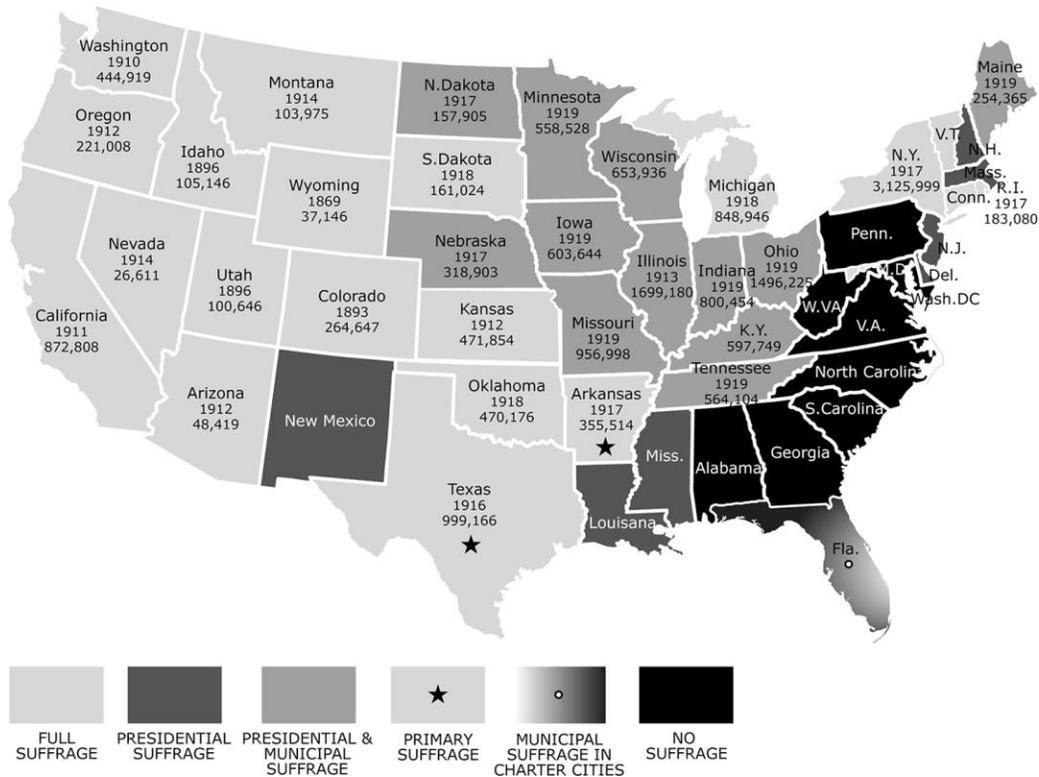
TAB 1:

The right of citizens of the United States to vote shall not be denied or abridged by the United States or by any State on account of sex. Congress shall have power to enforce this article by appropriate legislation.

–19th Amendment to the United States Constitution
(ratified in 1920)

TAB 2:

The Suffrage Map Early in August, 1920



14. Which conclusion is best supported by the information in the passage and the map?

- A. American women had no legal right to vote in presidential elections before 1920.
- B. The 19th Amendment guaranteed full economic and political equality for women.
- C. Most Western states had guaranteed full suffrage to women before 1920.
- D. Women in Alaska and Hawaii had no voting privileges before 1920.

Question 15 refers to the following sources.

TAB 1:

The following excerpt is taken from the Preamble to the Constitution of the United States of America:

“We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquility, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.”

TAB 2:

The following excerpt is taken from the Declaration of Independence:

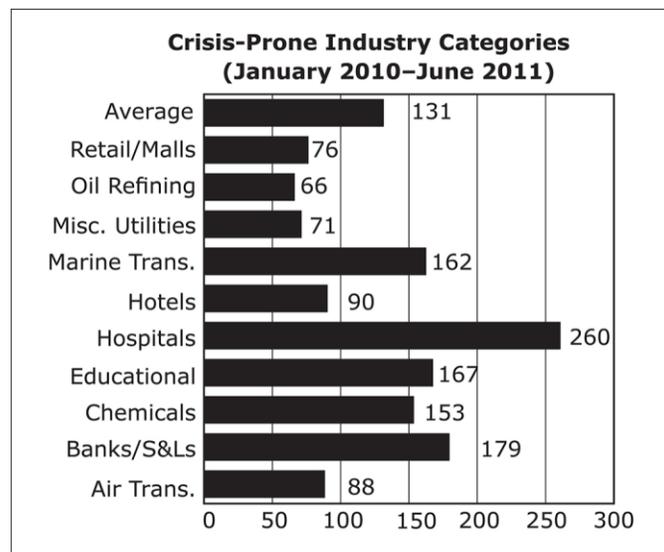
“We hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with

certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness.”

15. According to the excerpts provided, which of these principles is mentioned in the Preamble to the Constitution but NOT in the Declaration of Independence?

- A. the desire for freedom
- B. a united defense
- C. the desire for happiness
- D. the equality of all citizens

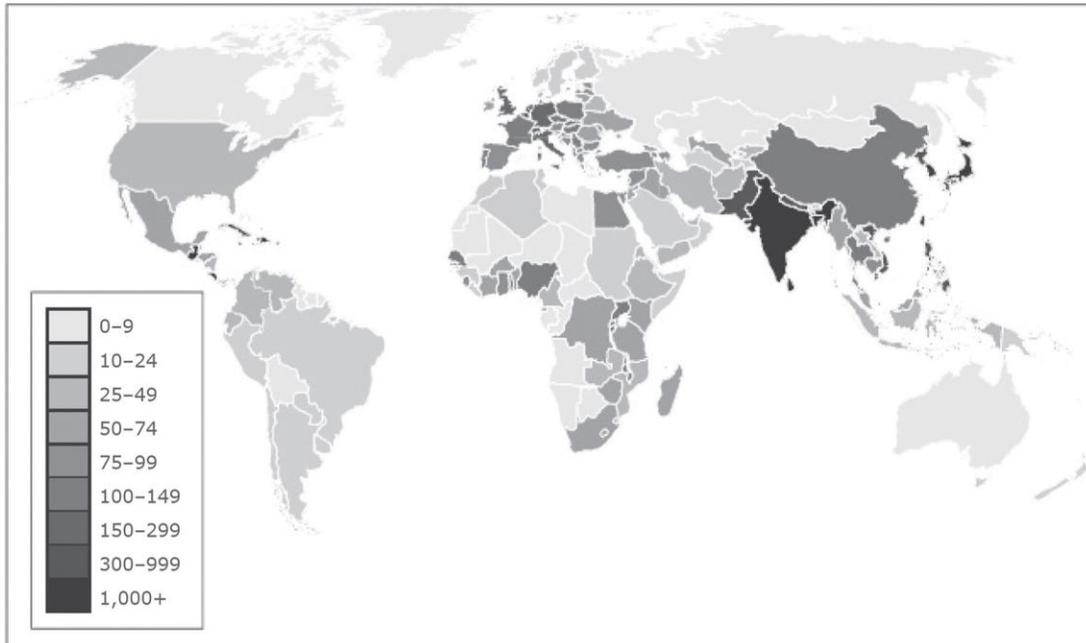
Question 16 refers to the following graph.



16. According to the graph, which of the following types of industries was LEAST likely to experience a crisis?

- A. education
- B. chemical
- C. hotel
- D. oil refining

Questions 17 and 18 are based on the following map.



Number of People Per Square Mile

17. According to the graph, what are the most densely populated continents?

- A. South America and Europe
- B. Asia and North America
- C. Europe and Asia
- D. South America and North America

18. What factors are the most influential in determining population density?

- A. climate and geography
- B. race and language
- C. religion
- D. public sanitation and health

Question 19 refers to the following sources:

TAB 1:

The following excerpt is from an article by Brian O’Sullivan from the *New York Morning News*, December 1845:

“And that claim is by the right of our manifest destiny to overspread and to possess the whole of the continent which Providence has given us for the development of the great experiment of liberty and federated self- government entrusted to us.”

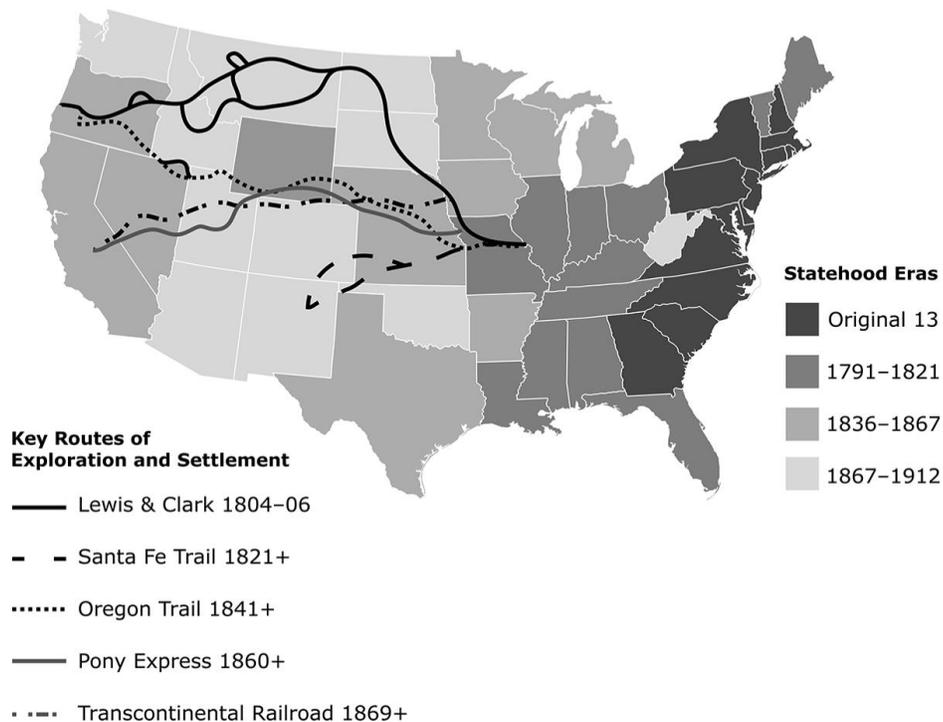
TAB 2:

“Most Democrats were wholehearted supporters of expansion, whereas many Whigs (especially in the North) were opposed. Whigs welcomed most of the changes wrought by industrialization but advocated strong government policies that would guide growth and development within the country’s existing boundaries; they feared (correctly) that expansion raised a contentious issue of the extension of slavery to the territories. On the other hand, many Democrats feared industrialization the Whigs welcomed....For many Democrats, the answer to the nation’s social ills was to continue to follow Thomas Jefferson’s vision of establishing agriculture in the new territories in order to counterbalance industrialization.”

–John Mack Faragher et al. *Out of Many: A History of the American People*

TAB 3:

Westward Expansion of the United States



19. Which of the following conclusions is most consistent with the excerpts and map?

- A. Elected in 1828, President Andrew Jackson was a Democrat who opposed Westward Expansion.
- B. Inspired by the principle of Manifest Destiny, President James K. Polk, a Democrat elected in 1845, sought to secure American control of the Southwest after the Mexican-American War.
- C. Whig presidents such as William Henry Harrison, elected in 1841, failed to gather support from the American people because of their insistence on Westward Expansion.

D. Many Democrats, including Franklin Pierce, elected in 1853, opposed the Transcontinental Railroad, since it threatened to expand slavery to Western territories.

20. The following is a quote by President Abraham Lincoln:

“A majority held in restraint by constitutional checks and limitations, and always changing easily with deliberate changes of popular opinions and sentiments, is the only true sovereign of a free people.”

The above quote most closely describes which of the following forms of government?

- A. a constitutional republic
- B. a monarchy
- C. a pure democracy
- D. anarchy

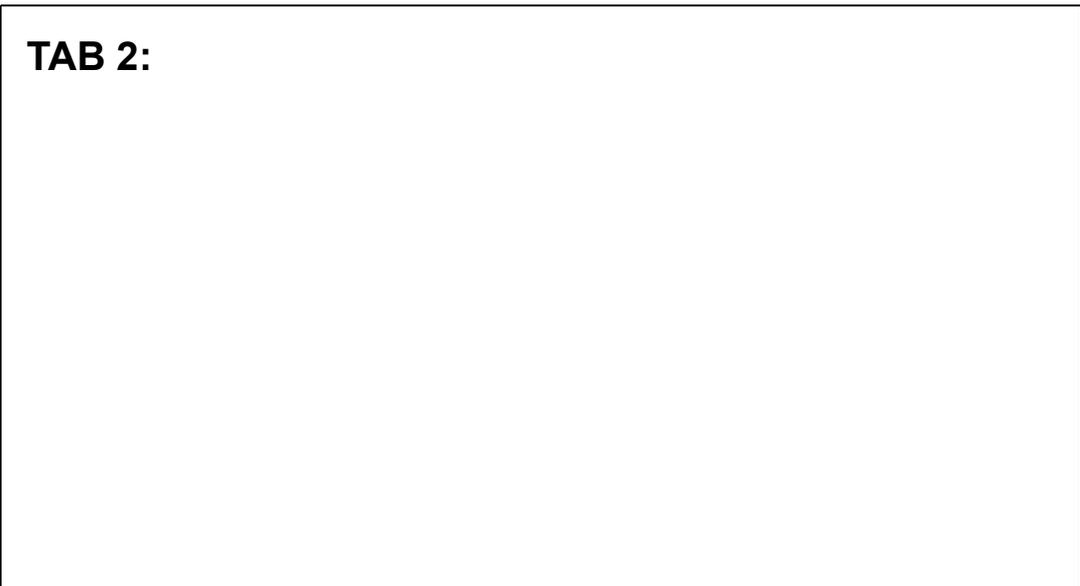
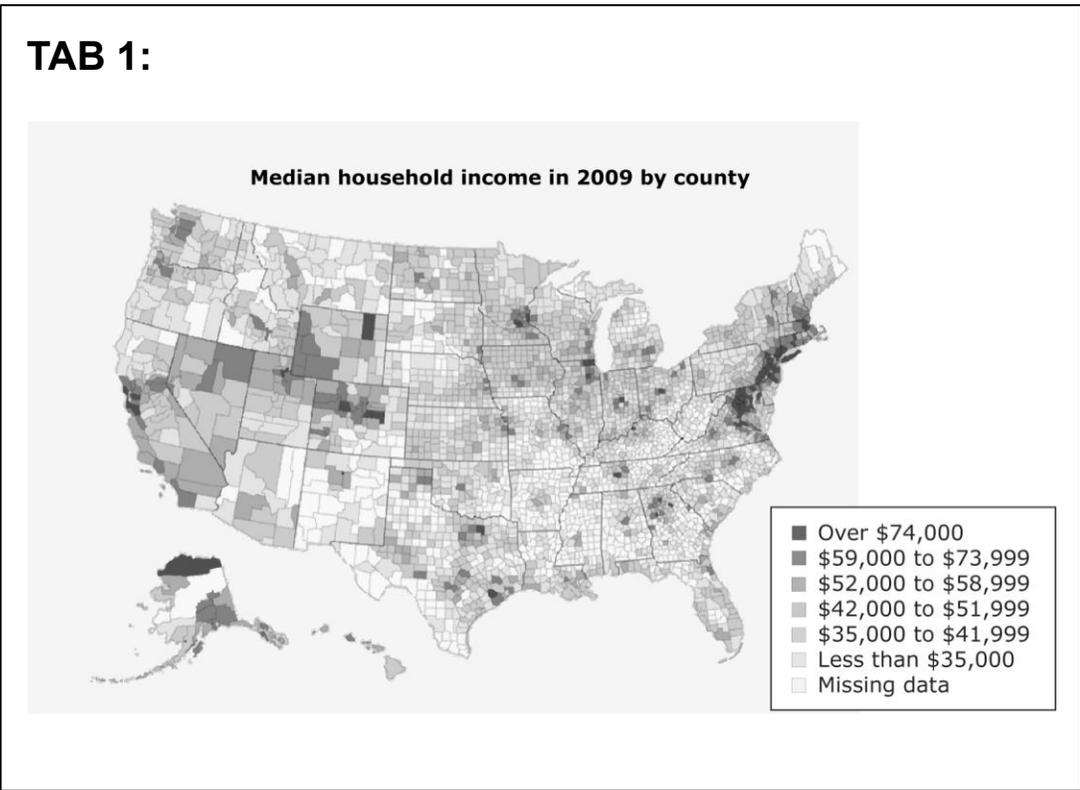
21. With improvements in technology, production becomes more efficient, increasing the output per worker of a given industry. Product quality rises, profits and wages increase, and the economy improves overall. In short, both workers and employers benefit.

Which of the following opinions contradicts the above conclusion about improvements in technology?

- A. New technology will cause companies to decrease the size of their workforce in order to cut costs.
- B. Product quality increases consumer satisfaction, which leads to greater company profits.

- C. When businesses succeed, more money is reinvested into the economy.
- D. Efficiency is a key factor in ensuring a business's success.

Question 22 refers to the following maps.





22. Based on this data, which conclusion about the U.S. economy is true?

- A. All counties with household incomes of \$74,000 or more in 2009 had the lowest unemployment rates.
- B. Southeastern states generally have a lower median income than Northeastern states.
- C. Only Plains states have unemployment rates below 5.0%.
- D. Hawaii has a lower rate of employment than Alaska.

Question 23 refers to the following sources.

TAB 1:

The following excerpt is taken from the 14th Amendment to the United States Constitution:

“Section 1. All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.”

TAB 2:

“We consider the underlying fallacy of the plaintiff’s argument to consist in the assumption that the enforced separation of the two races stamps the colored race with a badge of inferiority. If this be so, it is not by reason of anything found in the act, but solely because the colored race chooses to put that construction upon it.”

—Justice Henry B. Brown, U.S. Supreme Court, *Plessy v. Ferguson*, 1896

TAB 3:

“We conclude that, in the field of public education, the doctrine of “separate but equal” has no place. Separate educational facilities are inherently unequal. Therefore, we hold that the plaintiffs and others similarly situated for whom the actions have been brought are, by reason of the segregation complained of, deprived of the equal protection of the law.”

–from U.S. Supreme Court, *Brown v. Board of Education*,
1954

23. Which of the following conclusions is best supported by the passages?
- A. In *Brown v. Board of Education*, the Supreme Court relied on past legal decisions to help shape its ruling.
 - B. *Plessy v. Ferguson* upheld the 14th Amendment’s guarantee of “equal protection” under the law.
 - C. *Brown v. Board of Education* upheld the doctrine of “separate but equal.”
 - D. *Brown v. Board of Education* found that “separate but equal” facilities were a violation of the 14th Amendment.

24. The modern cotton gin was patented in 1794 by Eli Whitney. It allowed for the easier separation of cotton fibers from their seeds. Why was the cotton gin so revolutionary?

The cotton gin

- A. caused the massive growth of the wool industry in America.
- B. caused the economic destruction of rural farmland.
- C. ended the need for slavery.
- D. caused the expansion of the cotton industry in the American South.

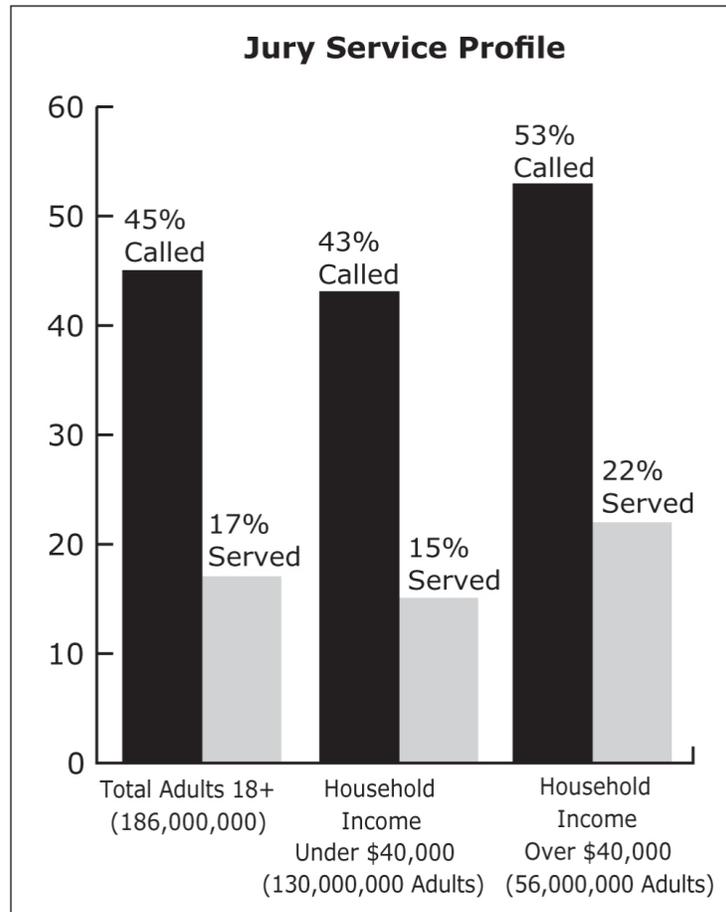
Question 25 refers to the following passage.

Interpreting the U.S. Constitution is so complex a task that it has become its own legal specialty, constitutional law. One example of the complexity of the Constitution is an

interpretation of the 13th Amendment, which states that there shall be no “involuntary servitude” except as a punishment for a crime. Due to this interpretation, Congress was reluctant for a long time to pass any draft resolutions in times of peace. Finally, in 1940, only one year before our entrance into World War II, Congress approved the first peacetime draft in our history.

25. What conclusion is supported by this statement about the interpretation of the Constitution?
- A. A document that needs amendments is not a reliable guide for government policy.
 - B. A document that can be reinterpreted is not an adequate method for resolving legal questions.
 - C. A text that causes controversy does more harm than good.
 - D. Interpretations of the Constitution can change, which in turn affect decisions made by lawmakers.

Question 26 refers to the following graph.



26. Which of the following statements is supported by the survey on jury service represented in the table?

- A. People with incomes under \$40,000 are twice as likely to be called as are those with higher incomes.
- B. A greater percentage of adults from households with incomes of more than \$40,000 have served on juries than the percentage of those from households with lower incomes.
- C. People with lower incomes are more likely to want to serve on juries.
- D. Most jurors have incomes between \$30,000 and \$35,000.

Questions 27 through 29 refer to the following information about energy production.

Three of the most common sources of energy are fossil fuels, nuclear power, and hydroelectric power. Each of these three methods of energy production has its advantages and disadvantages.

Fossil fuels are the most widely used energy source in the United States. The burning of oil and coal derivatives releases energy that is used to boil water. The released steam turns turbines and produces energy. Today, fossil fuels are relatively abundant, which makes this form of energy production inexpensive. However, one of the problems with fossil fuels is that burning oil and coal derivatives releases chemicals that are harmful to the environment.

Nuclear power harnesses the energy contained in atoms. The energy released is used to convert water to steam, which in turn drives turbines. This form of energy production has proven to be even less expensive than fossil fuels, but there is no foolproof method for storing all of the dangerous by-products from nuclear power plants.

Hydroelectric power is produced by using the force of a river to turn turbines. This is the cleanest of the three methods of energy production, but not all communities have access to rivers, and rivers with hydroelectric plants are much more vulnerable to the effects of erosion.

27. Which of the following would most likely result in an increase in the use of nuclear power?

- A. the invention of a safe radioactive-waste disposal method
- B. the discovery of a cleaner method of burning coal

- C. a decrease in taxes on fossil fuels
- D. increased oil exploration in Alaska

28. What do all three forms of energy production have in common?

- A. smoke
- B. smog
- C. erosion
- D. turbines

29. Which of the following communities would most likely use hydroelectric power?

- A. a desert community with little or no fossil fuel resources
- B. a town adjacent to a large river
- C. a community with large oil reserves
- D. a community in coal-rich West Virginia

Question 30 refers to the following cartoon.



“The Big Stick in the Caribbean Sea”

30. The above cartoon depicts which famous American in which major war?

- A. Theodore Roosevelt in the Spanish-American War
- B. Douglas MacArthur in World War II
- C. Count Frontenac in King William's War
- D. Norman Schwarzkopf in the Persian Gulf War

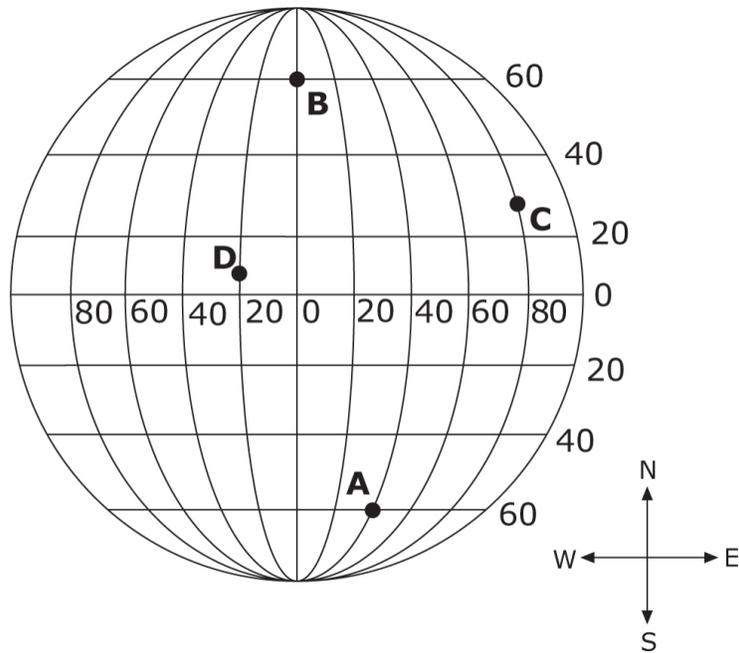
Question 31 refers to the following excerpt from U.S. history.

Development in California during the gold rush of 1849 was characterized by exploitation of the wilderness for economic gains. Entire forests were razed for lumber, and beautiful valleys were dammed up and lost forever to provide water pressure for strip mining. Such atrocities continued unhindered until one man stepped forward to argue on the behalf of the wilderness. John Muir almost single-handedly convinced President Roosevelt to create one of the nation's first national parks in Yosemite Valley, thereby protecting that portion of land from the dangers of development.

31. Which of the following might describe John Muir's opinions regarding the California wilderness?

- A. Economic interests should outweigh sentimental interests.
- B. It is acceptable to destroy natural beauty in some cases.
- C. Things that humans value should be used for human benefit.
- D. Some things have value that cannot be measured in monetary terms.

Question 32 refers to the following globe.



32. Which of the following lists the points on the globe from west to east?

- A. D, A, C, B
- B. C, B, D, A
- C. A, C, B, D
- D. D, B, A, C

33. Hurricanes are most seriously a threat to cities along the coast of the Atlantic Ocean and the Gulf of Mexico. Which city is NOT seriously threatened by hurricanes?

- A. Orlando, Florida
- B. New Orleans, Louisiana
- C. Chicago, Illinois
- D. Virginia Beach, Virginia

Question 34 refers to the following excerpt from a proclamation.

“Whereas, it has become necessary to call into service not only volunteers but also portions of the militia of the States by draft in order to suppress the insurrection existing in the United States, and disloyal persons are not adequately restrained by the ordinary processes of law from hindering this measure and from giving aid and comfort in various ways to the insurrection;

Now, therefore, be it ordered, first, that during the existing insurrection and as a necessary measure for suppressing the same, all Rebels and Insurgents, their aiders and abettors within the United States, and all persons discouraging volunteer enlistments, resisting militia drafts, or guilty of any disloyal practice, affording aid and comfort to Rebels against the authority of United States, shall be subject to martial law and liable to trial and punishment by Courts Martial or Military Commission.”

–President Abraham Lincoln, 1862

34. Determine whether or not the following statements are supported by the quote above. Drag and drop the statements into the “Yes” box if so and the “No” box if not. (For this practice test, write the statement letters in the appropriate boxes.)

Yes

No

--	--

(a) “Felons previously convicted in civilian courts would be subject to court-marshal and punishment.”

(b) “Those attempting to suppress rebels and insurgents would be subject to court-marshal and punishment.”

(c) “Those resisting the military draft would be subject to court-marshal and punishment.”

(d) “Volunteers for the militia would be subject to court-marshal and punishment.”

Question 35 refers to the following excerpt from a speech.

“I have never been a quitter. To leave office before my term is completed is abhorrent to every instinct in my body. But as President, I must put the interest of America first. America needs a full-time President and a full-time Congress, particularly at this time with problems we face at home and abroad. To continue to fight through the months ahead for my personal vindication would almost totally absorb the time and attention of both the President

and the Congress in a period when our entire focus should be on the great issues of peace abroad and prosperity without inflation at home. Therefore, I shall resign the Presidency effective at noon tomorrow. Vice President Ford will be sworn in as President at that hour in this office.”

–President Richard Nixon, August 1974

35. The above quote supports the conclusion that, after the Watergate scandal, President Nixon
- A. was forced to leave office after being impeached by the Congress.
 - B. resigned before completing his term of office.
 - C. appointed Vice President Ford as interim president.
 - D. continued on as full-time president, despite pressure from Congress.

Science

Welcome!

Here is some information that you need to know before you start this test:

- You should not spend too much time on a question if you are not certain of the answer; answer it the best you can, and go on to the next question.
- If you are not certain of the answer to a question, you can mark your answer for review and come back to it later.
- You have **90 minutes** to complete this test.

Turn the page to begin.

1. The table below lists the normal ranges of various chemicals found in human blood.

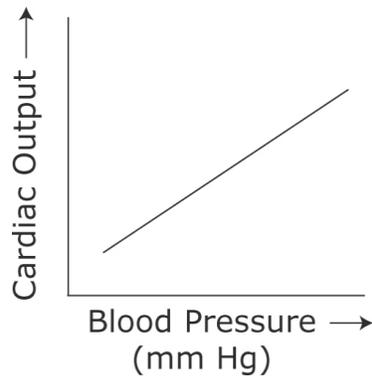
Substance	Normal Range
total cholesterol	125–200 mg/dL
HDL cholesterol	under 40 mg/dL
LDL cholesterol	under 130 mg/dL
triglycerides	under 150 mg/dL

Which of the following statements is accurate based on the table above?

- A. A total cholesterol level of 150 is considered normal.
- B. A triglyceride level of 180 is considered normal.
- C. An LDL cholesterol level of 110 is considered above normal.
- D. A triglyceride level of 100 is considered abnormal.

2. Cardiac output is the amount of blood a human heart pumps out per minute. Increases in heart rate, blood pressure, and cardiac muscle strength all lead to higher cardiac output. Below is a graph that shows the effects of blood pressure on cardiac output.

Cardiac Output and Blood Pressure



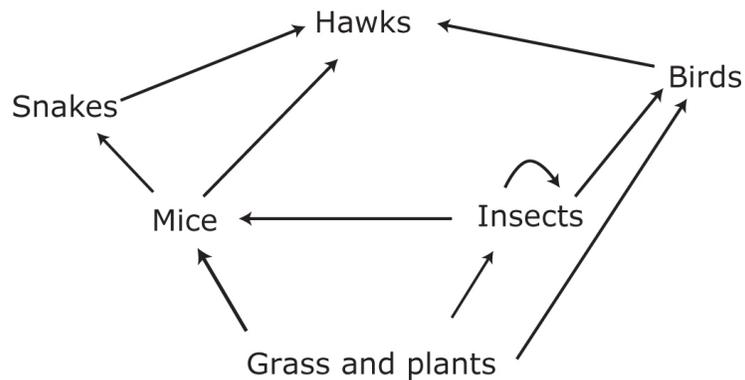
Which of the following conclusions is best supported by the graph?

- A. As blood pressure increases, cardiac output decreases.
- B. As blood pressure increases, cardiac output increases.
- C. Cardiac output is measured in mm HG.
- D. Cardiac output increases and decreases irregularly as blood pressure changes.

Questions 3 and 4 are based on the passage and food web shown below.

A food web is a diagram that shows which organisms feed on which other organisms in a community. The arrows point from the food sources to the consumers. Some animals are herbivores, meaning that they eat only plants, while some are carnivores, meaning that they eat only animals. Still others are omnivores, meaning that they eat both plants and animals. Below is a food web for a grassland ecosystem.

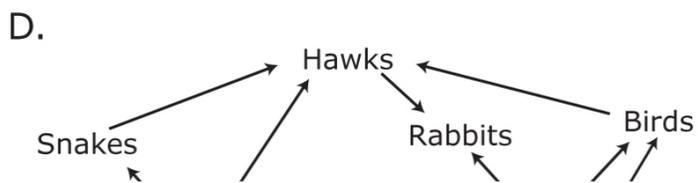
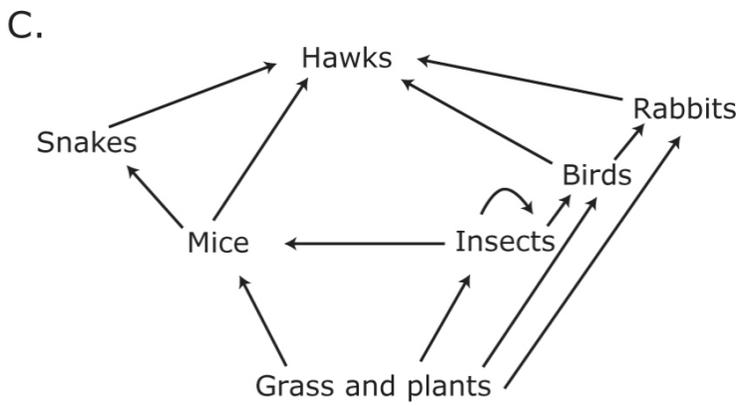
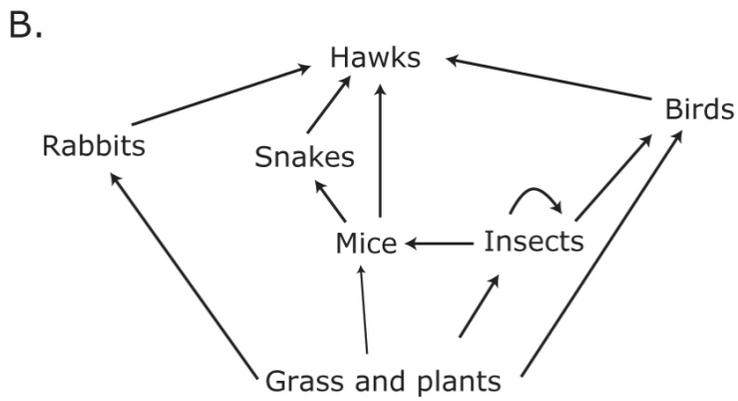
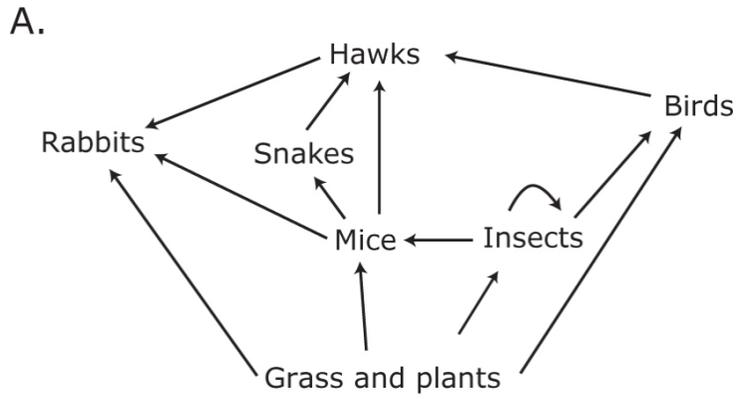
FOOD WEB

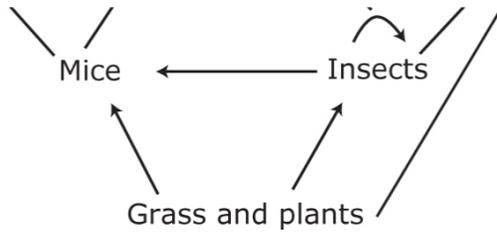


3. Which organisms in this food web are carnivores only?

- A. hawks only
- B. snakes only
- C. both snakes and hawks
- D. hawks, snakes, and insects

4. Hawks consume rabbits as well as the other animals listed in the food web. If rabbits are herbivores, which of the following food webs accurately includes rabbits in the grassland ecosystem?





5. Whether a substance is classified as acidic, basic, or neutral is determined by its pH. A pH below 7 is acidic, a pH of 7 is neutral, and a pH above 7 is basic. Below is a table of common substances and their pH values.

Substance	pH
lemon juice	2
water	7
vinegar	2.2
baking soda solution	8.3

Based on the information above, what percent of the substances in the table are basic?

You may use a calculator.

 %

6. A geode is a rock that appears dull on the outside but is filled with crystals inside. Many scientists theorize that some round geodes are formed when lava bubbles as it cools after a volcanic eruption. Minerals and water seep into the bubbles, and after the water evaporates, the minerals form crystals.

Which of the following best supports the theory discussed above?

- A. Round geodes generally contain fewer crystals than do geodes of other shapes.
- B. Some geodes have been discovered in areas where there are no volcanoes.
- C. The water and minerals that seep into geodes cool quickly after entering air bubbles inside the geodes.
- D. The minerals found in round geodes are also typically present in volcano lava.

7. A scientist wishes to determine whether using compost and nitrogen-rich fertilizer together will be more effective than using either alone. She hypothesizes that if she uses a combination of compost and nitrogen-rich fertilizer, then the plants that she grows will be taller and will grow more abundantly than they would if she used either independently.

To test her hypothesis, the scientist designs an experiment using groups of plants, with each group receiving different treatment, and with each group monitored and measured.

What is the minimum number of groups of plants that the experiment will require?

- A. two
- B. three
- C. four
- D. five

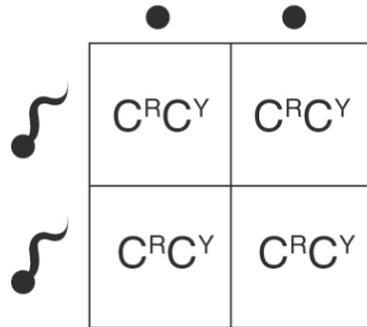
Question 8 is based on the passage below.

Hereditary traits are encoded in genes, which in turn are located on chromosomes. Chromosomes come in pairs, and the pair of genes associated with a particular feature

determines the characteristics of that trait. Often, there are several varieties of genes associated with a given trait. A gene is expressed when it is pure, meaning that it is expressed when both genes in a pair are alike. A hybrid pattern occurs when two genes in a pair are different, and in cases of incomplete dominance the two traits will blend together to make a new trait.

Flower color in carnations follows an incomplete dominance pattern. When both genes in a pair are associated with the color red, then the plant produces red flowers. When both genes in a pair are associated with the color yellow, the plant produces yellow flowers. When a plant is hybrid, and has one gene associated with the color red and another associated with the color yellow, then the two traits blend to produce orange flowers.

Below is a Punnett Square showing the results when a carnation with yellow flowers and a carnation with red flowers are crossed to produce offspring. Punnett Squares predict the likelihood of specific gene combinations occurring.



●	egg cell of female parent
⤿	sperm cell of male parent
C^R	gene for red color
C^Y	gene for yellow color

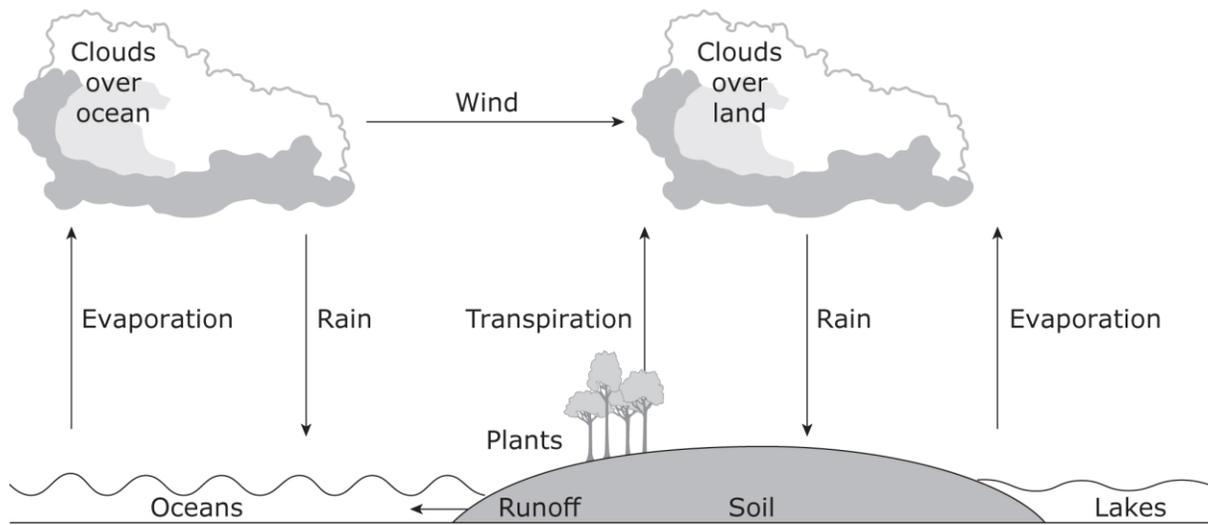
8. What color are the flowers of the offspring shown in the Punnett Square?

- A. All are red.
- B. All are yellow.
- C. All are orange.
- D. Half are red and half are yellow.

Question 9 is based on the following information.

Water is constantly being naturally recycled on Earth. Below is a picture of the water cycle, which depicts the natural processes that affect the flow of water.

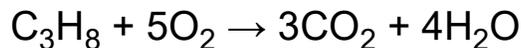
Water Cycle



9. Based on the figure, which of the following processes deliver(s) water to clouds?

- A. evaporation only
- B. evaporation and transpiration
- C. transpiration only
- D. evaporation and precipitation

10. The balanced equation below represents the oxidation process for propane.



Which of the following describes the reaction shown above?

- A. Oxygen reacts with propane to create carbon dioxide and water.
- B. Oxygen and propane react to create water.
- C. Oxygen is converted into carbon dioxide.
- D. Propane is converted into water.

11. Below is a table showing the percentage of total blood volume for several components of human blood.

Percent Composition of Human Blood	
Dissolved Gases	1%
Nutrients	3%
Red Blood Cells	43%
Water	51%
White Blood Cells	2%

What percentage of human blood is NOT made up of cells?

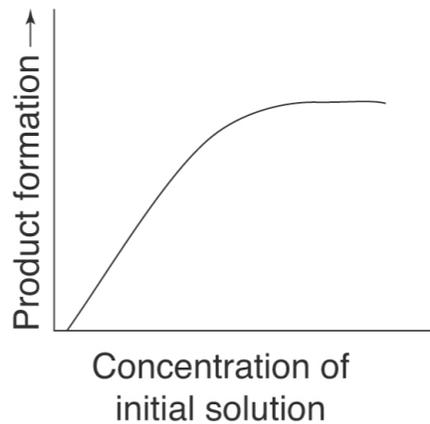
You may use a calculator.

%

12. An enzyme speeds up a chemical reaction by interacting with an initial substance and making it easier for that substance to form a product. In most cases, an enzyme can interact with only one molecule of the initial substance at a time.

The graph below shows the results of an experiment that measured the rate of product formation as the concentration of an initial substance was increased. A limited amount of the enzyme was present during the experiment.

Enzymes and Product Formation

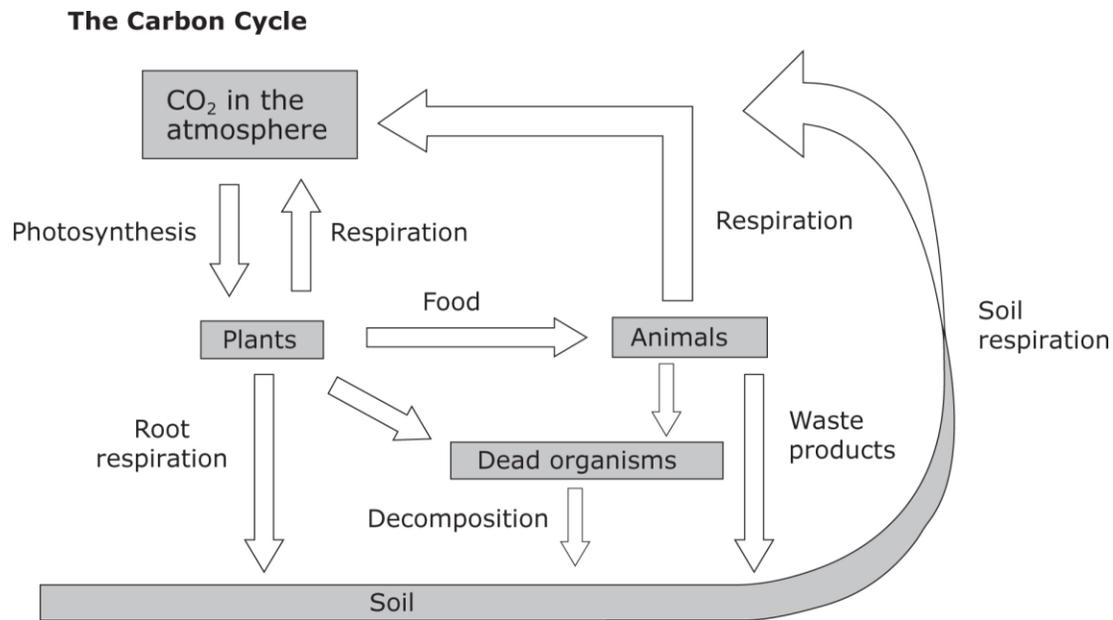


Which of the following best describes the results shown in the graph? As the concentration of the initial substance increased, the rate of product formation

- A. increased continually.
- B. initially increased and then became constant.
- C. increased and then decreased.
- D. remained constant.

Question 13 is based on the following information.

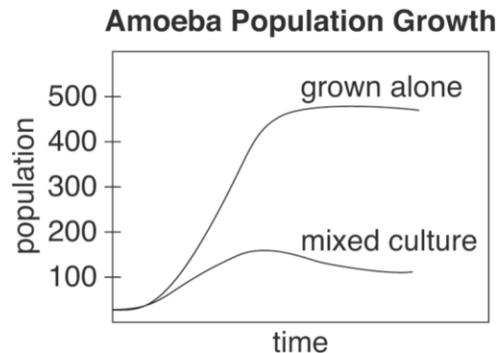
Plants use carbon dioxide to make food, and then that food is consumed by animals and eventually returns to the soil or atmosphere. The diagram below shows the carbon cycle.



13. Which of the following describes a process shown in the diagram?

- A. Plants absorb CO₂ from the atmosphere, and transfer some of that CO₂ to animals in the form of food, after which animals release waste products and transfer some of that CO₂ to the soil.
- B. Animals absorb CO₂ from the atmosphere and from dead organisms, and then transfer some of that CO₂ into the soil through waste products.
- C. Plants absorb CO₂ from the soil through respiration, and then transfer some of that CO₂ to the soil through root respiration, after which the soil transfers that CO₂ to the atmosphere through soil respiration.
- D. Plants absorb CO₂ from the soil through root respiration, and then transfer some of that CO₂ to animals in the form of food, after which the animals become dead organisms and transfer some of that CO₂ into the soil.

14. In most environments, there are a limited number of nutrients. As a result, living organisms must compete for food and resources. The graph below shows the results of two experiments, one in which an amoeba was cultured alone and one in which it was cultured with a mixture of other single-celled organisms. The same nutrients were provided to each culture.



Which of the following conclusions can be drawn from the graph above?

- A. This species of amoebas is more likely to thrive if cultured in a mixed culture than if cultured alone.
 - B. This species of amoebas is more likely to reproduce rapidly if cultured alone than if cultured in a mixed culture.
 - C. The population of this species of amoebas will continue to increase indefinitely if the amoebas are cultured alone.
 - D. If cultured in a mixed culture, this species of amoebas will initially increase in population, but will eventually die out.
15. Scientists use the following formula to calculate the force of gravity that two objects exert on each other:

In the equation

$$F = \frac{G \times M \times m}{r^2}$$

F is the force of gravity;

G is a constant;

M is the mass of one of the objects;

m is the mass of the second object;

r is the distance between the centers of the objects.

If an object with a given mass m is replaced by an object of half its mass, which of the following will increase the force of gravity?

- A. increasing mass M and doubling the distance between the objects
- B. reducing mass M and doubling the distance between the objects
- C. reducing mass M and halving the distance between the objects
- D. increasing mass M and halving the distance between the objects

16. The table below shows an analysis of the composition of soil taken from a canyon in the desert.

Material	Percent Composition
Silt	25
Clay	15
Calcium Carbonate	14
Sedimentary Rock	13
Metamorphic Rock	11
Gypsum	8
Caliche	6

Salt	4
Zinc	2
Boron	2

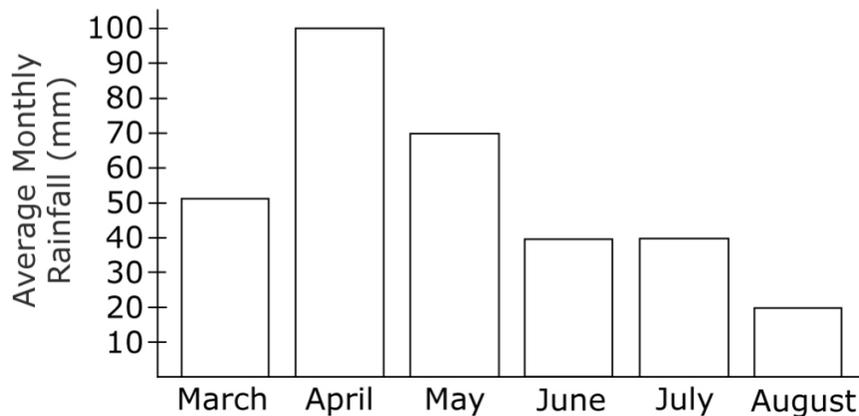
What is the median of the numbers listed in the table above?

You may use a calculator.

Questions 17 and 18 both refer to the graph below.

The graph below shows the amount of rainfall during the spring and summer months in the city of Mayfair.

Amount of Rainfall in Spring and Summer



17. Between which two months was the increase in average monthly rainfall the greatest?

- A. March and April
- B. April and May
- C. May and June

D. June and July

18. What was the mode of the average monthly rainfall for the months shown above?

- A. 40
- B. 45
- C. 50
- D. 55

Questions 19 and 20 are based on the information below.

An atom contains neutrons, protons, and electrons. The atomic number of an element is the number of protons in one atom of that element, and the atomic mass is equal to the sum of the number of protons and the number of neutrons. The chart below lists the numbers of protons, neutrons, and electrons in three common elements.

Element	Protons	Neutrons	Electrons
Carbon	6	6	6
Nitrogen	7	7	7
Oxygen	8	8	8

19. Drag and drop the appropriate element into each box. (For this practice test, write the element letters in the boxes.)

The element with an atomic mass of 16:	The element with an atomic number of 7:	The element with an atomic mass of 12:
--	---	--

(a) Carbon

(b) Nitrogen

(c) Oxygen

20. Based on the information and the table, which of the following is true?

- A. A nitrogen cation, which has one fewer electron than does an ordinary nitrogen atom, has an atomic number of 6.
- B. Fluorine, which has an atomic number of 9, has more protons than does oxygen.
- C. Boron, which has an atomic mass of 10 and an atomic number of 5, has more neutrons than does carbon.
- D. An oxygen anion, which has more electrons than does an ordinary oxygen atom, has an atomic mass of 15.

Questions 21 and 22 are based on the information and chart below.

The Richter scale measures seismic activity, or energy released in the form of heat and vibration during earthquakes. The scale is a logarithmic, base-10 scale, which means that an earthquake measuring 3.0 on the Richter scale has a shaking amplitude 10 times more powerful than does an earthquake measuring 2.0.

The chart below shows the classifications and effects of various earthquakes and their measurements on the Richter scale.

Richter Magnitude	Classification	Effects

less than 2.0	micro	not felt
2.0–3.9	minor	may be felt
4.0–4.9	light	noticeable shaking but damages are unlikely
5.0–5.9	moderate	may cause damage to unstable structures
6.0–6.9	strong	can cause damages in areas up to 100 miles from epicenter
7.0–7.9	major	can cause damages in areas several hundred miles from epicenter
8.0–8.9	great	can cause damages in areas several thousand miles from epicenter

21. An earthquake causes severe structural damage to a house located within 150 miles of the epicenter of the quake. Which of the following is the best likely description of the earthquake?

- A. The earthquake was less than moderate, measuring below 5.0 on the Richter scale.
- B. The earthquake was moderate, measuring between 5.0 and 5.9 on the Richter scale.
- C. The earthquake was strong, measuring between 6.0 and 6.9 on the Richter scale.
- D. The earthquake was major or great, measuring more than 7.0 on the Richter scale.

22. An earthquake in California measures 4.0 on the Richter scale, and an earthquake in Taiwan measures 6.0 on the Richter scale. According to the information in the passage, what is the

ratio of the shaking amplitude of the earthquake in California to the shaking amplitude of the earthquake in Taiwan?

You may use a calculator.

- A. 1:100
- B. 1:200
- C. 1:1,000
- D. 1:10,000

Questions 23 and 24 refer to the following information.

In an ecosystem, each living thing plays a specific role in the food chain. For example, in the forest, mice eat plants, and snakes eat mice. The path that energy takes can be shown through the following food chain:

plants → mice → snakes

A food web is another way to demonstrate how energy is transferred from one species to another within an ecosystem. The figure shows a food web for an ocean ecosystem. In a food web, living creatures fall into the following categories:

Autotrophs create their own food, and do not gain their nutrition from other creatures.

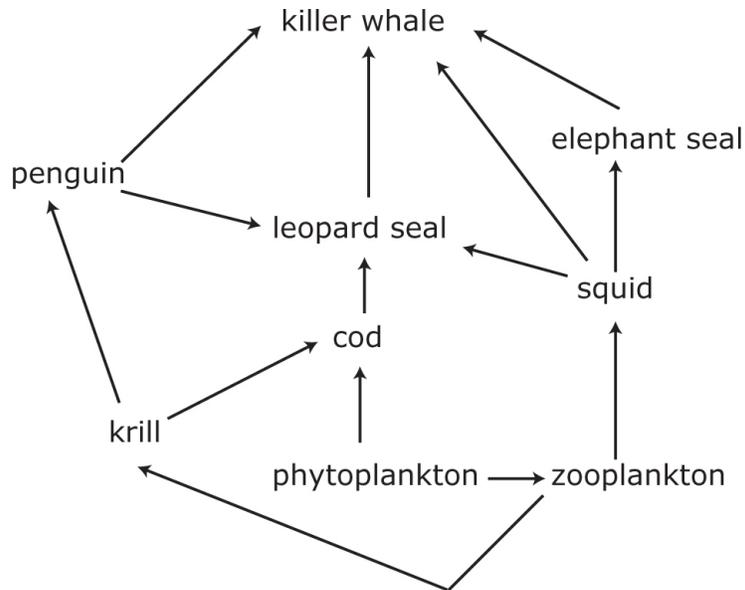
Primary consumers, or herbivores, eat plants, algae, and other producers.

Secondary consumers eat primary consumers.

Tertiary consumers eat secondary consumers.

Apex predators are at the top of the food chain, and have no predators other than humans.

Consumers can be carnivores (creatures that eat meat), herbivores (creatures that eat plants), or omnivores (creatures that eat both plants and animals).



23. Which term accurately describes the role that the elephant seal plays in this ecosystem?

- A. autotroph
- B. primary consumer
- C. secondary consumer
- D. apex predator

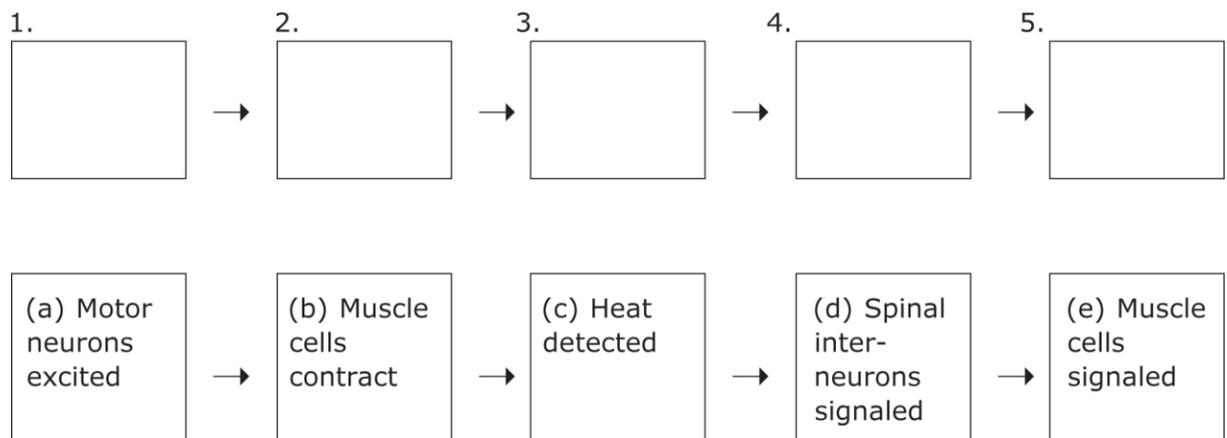
24. In the ecosystem above, if the population of krill were depleted, which of the following consumers would be most affected?

- A. killer whales
- B. squid
- C. leopard seals

D. elephant seals

25. When humans come into contact with objects that inflict pain, they reflexively move away from those objects. Consider the example of a person who touches a hot stove. Provided that the person in question has normal motor abilities and has not suffered nerve damage, that person will almost instantly draw away from the stove. Such action is initiated when sensory receptors in the skin detect dangerous heat levels. These receptors send signals along the axon of the receptor cell to spinal interneurons in the spinal cord. The spinal interneurons excite the motor neurons that control the arm muscles, which in turn send signals to the muscle cells. The muscle cells then contract, causing the arm to move away.

Using the information above, drag and drop the steps that show the process that occurs when an individual touches a dangerously hot object into the diagram below. (For this practice test, write the letters in the boxes.)



26. A research team plans to conduct an experiment to test whether a certain chemical compound causes outbreaks of

hives in average adults. In total, 1,000 adults volunteer for the study.

The research team plans to divide their test subjects into two groups: an experimental group that will be exposed to the compound, and a control group that will not. Both groups will be monitored for any reactions.

When the research team interviews their volunteers, they find that 60 of the volunteers are chronic sufferers of rashes and hives due to allergies.

To ensure the best results from their experiment, how should the researchers handle these 60 chronic allergy sufferers?

- A. They should all be included in the experiment, since they are representative of the overall population.
 - B. They should not be included in the experiment, since their chronic condition might unduly influence the results of the experiment.
 - C. They should be included only in the experimental group, because they are more likely to show the results that the scientists are looking for.
 - D. They should be included only in the control group, because the chemical compound might be more dangerous to them than to others.
27. A particular aircraft has a mass of 1,800 kilograms, and has engines that provide 90,000 Newtons of thrust force. A second aircraft has a mass of only 1,500 kilograms, but has engines that provide exactly the same acceleration. What amount of thrust force do that aircraft's engines provide?

You may use a calculator.

Force [Newtons] = mass [kilograms] × acceleration [meters/second²]

- A. 50 Newtons
- B. 60 Newtons
- C. 75,000 Newtons
- D. 108,000 Newtons

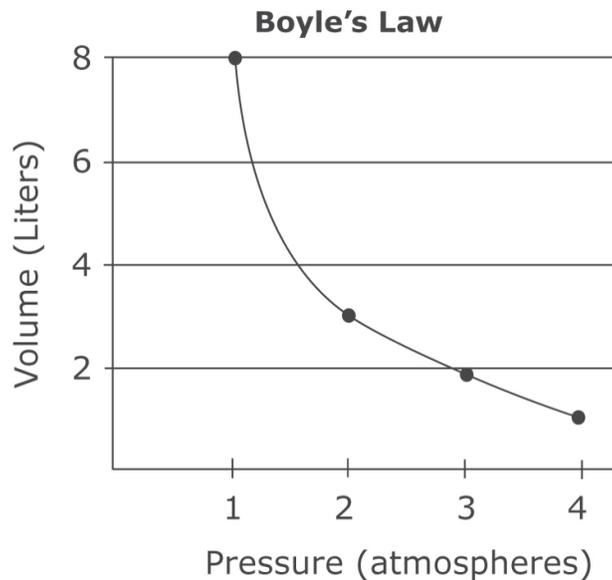
28. Scientists use index fossils to identify the times at which unidentified fossils and certain sediments were deposited. They hypothesize that if a particular fossil is found near an index fossil, in the same layer of rock, then the two fossils were likely from the same time period. The shorter the lifespan of the index fossil species, the more precisely scientists are able to correlate that species with a particular era. Therefore, it is not surprising that ideal index fossils are from short-lived, common, and easy-to-identify species.

Which of the following is an example of the effective use of index fossils?

- A. Scientists fix the time that *Mesolenellus hyperborea* existed in the late *Nevadella* era, because they find *Mesolenellus hyperborea* near and in the same level of rock as *Limniphacos perspiculum*, a recognized index fossil that existed in that period.
- B. Scientists determine that *Mesolenellus hyperborea* were probably mud bottom-dwellers, because hyolitha, which existed during the same time period as *Mesolenellus hyperborea*, were also bottom dwellers.
- C. Scientists hypothesize that *Mesolenellus hyperborea* were wiped out by a sudden climate change that occurred at the end of the Devonian period, when many other trilobites were wiped out.

D. Scientists determine that *Mesolenellus hyperborea* did not exist in Iceland, because *Petrianna fulmentata*, a similar trilobite, did not exist in Iceland.

29. Boyle's Law explains some aspects of the behavior of gases, such as those in our atmosphere. The law states that if temperature remains constant, volume decreases as pressure increases. The graph below illustrates Boyle's Law for one gas.



Which of the following is supported by the information in the graph above?

- A. Pressure and volume are directly proportional.
- B. As the pressure rises from 1 atmosphere to 3 atmospheres, the volume increases from 2 liters to 8 liters.
- C. As the pressure rises from 1 atmosphere to 2 atmospheres, the volume decreases from 8 liters to 2 liters.
- D. If the trend in the graph continues, then when the pressure reaches 5 atmospheres, the volume will near $\frac{1}{2}$ liter.

30. Mass is an indicator of the amount of matter that an object possesses. Scientists determine the weight of an object by multiplying its mass by the acceleration that the object experiences due to gravity. The acceleration due to gravity on the Moon is approximately $\frac{1}{6}$ the acceleration due to gravity on the Earth.

Based on the information above, a person would have

Select... ▼	Select... ▼	on the Moon.
more	weight	
less	mass	

31. Scientific theory holds that convergent evolution occurs when different species independently evolve analogous structures, or features that may appear different, but perform the same function. Creatures evolve such structures in order to adapt to their environments.

A scientist argues that bats and birds have analogous structures. Which of the following supports his argument?

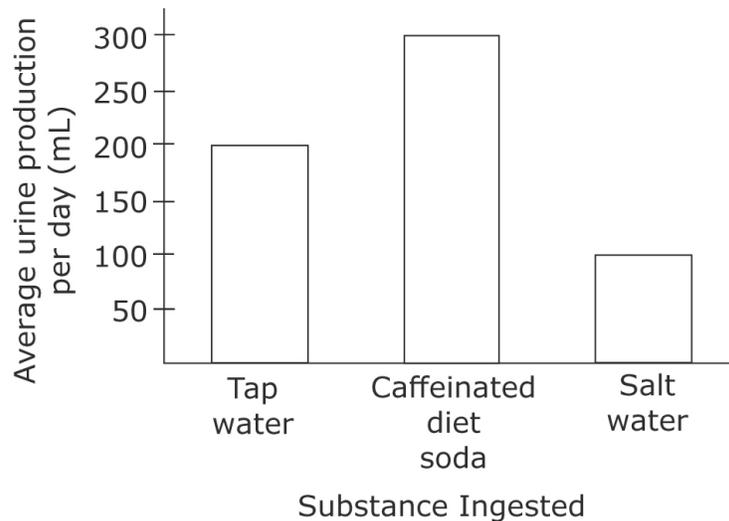
- A. Bats use echolocation to track their prey, while birds rely primarily on sight.
- B. Unlike bird wings, bat wings are composed primarily of membrane, but both types of wings provide flight capabilities.
- C. Baby bats gain nourishment from their mother's milk, while baby birds eat worms and bugs brought by their mothers.

D. Both bats and birds frequently make their homes in trees, bridges, and attics.

Questions 32 and 33 are based on the information below.

A scientist conducts a study to determine the effects that certain substances have on those who suffer from polyuria, or excessive urine production. During a two-week period, the 500 volunteers participating in the study drink two liters of water per day, and do not consume any other liquids. During the next two-week period, the same 500 volunteers drink two liters of caffeinated diet soda per day, and do not consume any other liquids. During a final two-week period, the same 500 volunteers drink two liters of water containing a mild amount of salt per day. The scientist tracks each volunteer's urine output each day. The volunteers all follow exactly the same diet in the first two-week period as they do in the second two-week period and in the third two-week period. The average daily urine output per volunteer for each of the two-week periods is shown below.

Urine Production after Consuming Different Substances



32. The data support which of the following conclusions?

- A. Individuals suffering from polyuria may benefit from drinking caffeinated diet sodas.
- B. Individuals who drink water with a high salt content are more likely than others to suffer from polyuria.
- C. Individuals who suffer from polyuria should avoid consuming large amounts of caffeinated diet soda.
- D. Individuals who suffer from polyuria should vary their liquid consumption by drinking some water, some caffeinated diet sodas, and some slightly salty water.

33. The passage indicates that the volunteers followed the same diet during each two-week period of the study. Why was this important?

- A. Had the volunteers varied their diets throughout the study, the differences in urine production may have been attributable to differences in solid food consumption, rather than in liquid consumption.

- B. Had the volunteers varied their diets throughout the study, they may have craved different amounts of liquid each week.
- C. By eating the same foods each week, the volunteers ensured that they did not suffer from any nutritional imbalances throughout the study.
- D. By feeding the volunteers the same foods each week, the scientist ensured that the volunteers produced that same amount of urine as each other per day.

34. Chemicals can be classified as acidic, neutral, or basic, depending on their pH measurements. A pH below 7 indicates that a substance is acidic, a pH of 7 means that a substance is neutral, and a pH above 7 means that a substance is basic. An indicator is a chemical compound that, when added to a substance, changes color based on the pH of the solution. For example, cabbage juice is an indicator that turns blue when added to a basic substance.

Liquid	pH
apple juice	3
water	7
acid rain	5
ammonia	11

Based on the information and the table above, which of the following substances, if combined with cabbage juice, would cause the cabbage juice to turn blue?

- A. apple juice and acid rain
- B. water
- C. acid rain

D. ammonia

35. Geologists classify rocks in three main categories: igneous, sedimentary, and metamorphic. Igneous rock forms when melted rock cools and hardens. Below ground, igneous rock forms when melted rock known as magma cools in small pockets. Above ground, igneous rock forms when volcanoes erupt and spew lava that cools and hardens into igneous rock. Sedimentary rock forms when minerals or organic particles accumulate and settle in a specific place on the Earth's surface or within a body of water. Metamorphic rock forms when existing rocks are transformed by heat and pressure, and as a result experience profound chemical and physical changes.

A student discovers a rock that he hypothesizes may be igneous. Which of the following supports the student's hypothesis?

- A. The rock has undergone profound chemical changes at some point in its history.
- B. The rock was found within an underground lake.
- C. The rock was found near the site of a recent volcano eruption.
- D. The rock is composed of minerals.

Practice Test 18: Answers and Explanations

REASONING THROUGH LANGUAGE ARTS

Section 1

1. C

This language use question requires test takers to determine which definition of the word “unpretentious” matches its use in paragraph 1. Each of the answer options reflects an actual definition of the word “unpretentious,” so look closely at the way the word is used in context. The word is used as a part of the sentence “Plain, large and unpretentious, it described itself in an illuminated sign.” Here, the word “unpretentious” is part of a list of adjectives, beginning with the word “plain,” that describe the hotel mentioned in the previous sentence. So here the word “unpretentious” is used to mean “not fancy.” Choice (A) is incorrect because the passage is not claiming that the hotel lacks ambition. Nor would a hotel be “easygoing,” so eliminate (B). Choice (C) is correct: “without excessive ornament” means “not fancy.” Finally, (D) is incorrect because “straightforward, direct” is a characteristic that describes a person’s manner or an idea, not a building. The correct answer is (C).

2. C

This development question asks specifically how the nighttime view of the city (paragraph 2) affects the narrator. Consider all of the details in paragraph 2 to get a sense of the narrator’s attitude. The narrator uses phrases like “a city of beautiful streets and magnificent buildings,” “Every street or avenue glistens at night,” “another still more wonderful,” and “indescribable orgy of light.” Therefore, the author is impressed by the beauty of the city, especially the illumination. Choice (A) is incorrect. While the narrator does mention “a bewildering multitude of illuminated signs,” there is nothing to indicate that the narrator is overwhelmed. Eliminate (B) because,

while the author does mention the number of lights in the phrase “tens of thousands of lights wonderfully displayed,” the phrase “wonderfully displayed” does not mean that the narrator is “wondering at” the number of lights. Rather, the narrator uses this phrase to express admiration for the signs. Choice (C) is correct: “rejoices” reflects all the positive language the narrator uses to describe the city at night. Choice (D) is incorrect because the narrator is not “disillusioned” or disappointed by the city, but rather admires it. The correct answer is (C).

3. **B**

This structure question asks why the author chose to use a certain phrase, so locate the detail and consider the context of the surrounding text. The phrase occurs in paragraph 2: “The first impression of a stranger visiting a large American city at night is that he is in a children’s luminous palace.” The passage goes on to say “There are illuminations and decorations of every conceivable nature.” All of these descriptions refer to the “advertising” mentioned in the sentence, so the quotation in the question is referring to advertising signs, and “every conceivable nature” shows that the narrator is impressed by the number of signs. Choice (A) is incorrect: Although the use of the word “children” might seem to imply “innocence,” the author never observes “innocence” about the city. Choice (B) is correct, indicating that the author is impressed with how many advertisements there are in the city. Eliminate (C), because while the phrase “children’s luminous palace” is certainly a poetic representation of the narrator’s feelings, there is nothing about the “regal nature of America” anywhere in the excerpt. Choice (D) is incorrect because it is contrary to the author’s purpose: The author is admiring the nighttime city. The correct answer is (B).

4. **A**

This is actually a plot development question, because the phrase suggests something about the author’s broader experiences. Paragraph 3 states, “When I found myself finally back in my hotel I was to be the victim of still another disillusionment.” The passage continues “No country anywhere could rival America for hotels, I had thought.” So the “disillusionment” refers to the mistaken thought the author had about American hotels. “Still another” implies that the narrator has had mistaken thoughts about America before. Choice (A) is correct: This phrase indicates that the author has been mistaken before. Choice (B) contradicts the passage: All the details in paragraph 2 indicate that the narrator admires the city at night. Choice (C) is incorrect because the “National” is the hotel where the narrator is staying (paragraph 3), which reveals the mistaken assumption the author had about hotels. Choice (D) is incorrect because in paragraph 1 the author feels satisfied with the hotel (“I found a hotel that, from the outside, just suited my fancy,”) and so would not have been reluctant to return. The correct answer is (A).

5. **D**

This is a structure question about the use of “senile” in paragraph 3, so locate the detail and consider the context: “The furniture, consisting of one bed, one dressing-table, one wardrobe and one chair was obviously suffering from advanced senile decay.” This sentence occurs within a larger description of the shabby appearance of the room overall. Therefore, “senile” repeats the emphasis that all parts of the room are worn out, by emphasizing the age of the furniture. Choice (A) is incorrect: Although the use of the word is intended to mean “advanced age,” it applies to the furniture, not the hotel. Choice (B) is incorrect because the author applies the word “senile” to all the furniture in the list—nothing in the room is new. Eliminate (C) because this paragraph discusses the room, not the manager. Choice

(D) is correct: All the items of furniture are old, which builds on the author's description of the room overall. The correct answer is (D).

6. **D**

This question asks about the character development of the narrator as shown through certain actions. Paragraph 3 directly states, "putting my revolver under the blanket near me in case of possible eventualities, I laid me down in peace to sleep." The use of the phrase "possible eventualities" suggests that the narrator is preparing for anything that may happen, specifically because the door was "minus a lock for many a long day." So, the narrator places the revolver in preparation for what may happen because of the unlocked door. Choice (A) is contradictory because "laid me down in peace" indicates that the author is not fearful, and the neighborhood is never described as rough. Choice (B) is incorrect: Even though the narrator states, "I was too tired, however, to bother," the action of placing the revolver under the blanket is not due to tiredness, but a purposeful response to the unlocked door. Eliminate (C) because nothing in the excerpt indicates that the author has a naturally violent temper. Choice (D) correctly indicates that the narrator's action is done in deliberate preparation for a possibly dangerous situation (the unlocked door). The correct answer is (D).

7. **A**

This question asks about the author's purpose in choosing that sentence for the conclusion. So, consider the role the last sentence plays in the excerpt as a whole. Paragraph 5 relates the speech the narrator gives to the manager regarding the shabby hotel room: "never in ANY city at ANY time have I struck ANY hotel that for sheer rottenness compares with THIS one!" The manager would likely be outraged at hearing such a criticism, so for the excerpt to conclude, "I have an idea at the back of my mind that that manager-man doesn't

love Englishmen!” is an ironic understatement about the manager’s true feelings. Thus, (A) is correct. Choice (B) is incorrect because the purpose of the sentence is to close the scene with humor or irony, not to guess about the manager’s preferences. Eliminate (C), because the narrator is angry about the condition of the room, not suspicious of the manager. Choice (D) is contradictory to the passage: The narrator does not show regret for complaining, but instead makes an ironic comment. The correct answer is (A).

8. **B**

This question asks about the narrator, so at first it may seem like a character development question. However, the entire passage is about the narrator, so focus on the main idea. A major theme is that the narrator is a foreigner visiting America, as is suggested by the title and the words “a stranger visiting a large American city” (paragraph 2). Choice (A) contradicts the passage: All the details in paragraph 2 indicate that the narrator admires the city. Choice (B) is correct since paragraph 6 indicates the narrator is from England. Eliminate (C) because the sentence “No country anywhere could rival America for hotels, I had thought” (paragraph 3) strongly indicates that the narrator has been to other places in America before. Even though the narrator shouts once in paragraph 5, there is no evidence to indicate that the narrator is loud-mouthed in general, so eliminate (D). The correct answer is (B).

9. This Evaluation item asks the reader to identify evidence for claims made by the Affirmative side. The claims and their corresponding evidence:

Claim: The need for concentrating all power into a commission is evident.

- **Evidence (a):** There is a charter revision committee meeting in New York.
- **Evidence (b):** More than a dozen cities have thrown away their old forms.

Paragraph 2 begins “So evident is the need for this solution that there is now a charter revision committee meeting in New York.” Paragraph 3 follows this with “What is true of New York is true of scores of other cities...within the past year more than a dozen cities have thrown away their old forms.”

Claim: When one branch of the government dominates, checks and balances between the departments are lost.

- **Evidence (c):** Some cities have lost funds due to a corrupt administration.
- **Evidence (e):** The council in St. Louis took a bribe to pass a street railway franchise.

The Affirmative lists examples of instances in which the checks and balances “failed” in paragraph 5, including New York City, Philadelphia, and St. Louis.

10. **D**

This structure question asks which idea about city government is included in the Affirmative. Choice (A) contradicts the passage because the Affirmative advocates “concentrating all governmental authority in one responsible body” (paragraph 1), not retaining separate bodies. Choice (B) is incorrect because this is an assertion made by the Negative in paragraph 10. Choice (C) also contradicts the passage, as the Affirmative advocates for one, not several, governing bodies. Choice (D) is correct: Paragraph 3 states “within the past year

more than a dozen cities have thrown away their old forms.” The correct answer is (D).

11. **D**

This structure question asks which detail is supported by the argument of the Negative. Choice (A) is incorrect because it is too narrow: The passage did not claim that the cabinet form of city government is found only in Europe. Neither did the Negative claim that the cabinet form is preferable to the mayor and council form, so (B) is also incorrect. Choice (C) is incorrect because the Affirmative is the side that blames separation of departments for corruption (paragraph 5). Choice (D) is correct: Paragraph 8 mentions “cities which have successfully adopted the mayor and council form by utilizing the model charter of the National Municipal League.” The correct answer is (D).

12. **A**

This evaluation question asks about which claim by the Negative is supported by a detail in the passage. The sentence from paragraph 11 immediately follows this one: “The remedy lies in restoring to the city its proper field of legislation.” Therefore, (A) is correct. Choice (B) is another piece of evidence for the same idea that is more precisely expressed by (A). Choices (C) and (D) are incorrect because while they are assertions made by the Negative, the selected sentence from paragraph 11 is not evidence for these assertions. The correct answer is (A).

13. **B**

This structure question asks which specific detail by the Negative supports the idea that there are disadvantages to the commission form of government. Choice (A) is incorrect because this quote refers to the

mayor and council form. Choice (B) is correct: The full sentence asserts that the city again adopted distinct legislative and administrative bodies after years of “misrule” by the commission form. Choice (C) is incorrect because this refers to the current municipal system that needs reform, not the solution proposed by the Affirmative of the commission form. While (D) indicates that the commission form may be too recent to evaluate, there is no indication in this quote of a disadvantage. The correct answer is (B).

14. A

This evaluation question asks how the Negative side builds the argument that the Affirmative’s position is incorrect. The Negative begins in paragraph 7 by acknowledging that there is a problem with current city government, but questioning the solution proposed by the Affirmative. Therefore, (A) is correct: The Negative offers different solutions to the problem—the cabinet form or mayor and council form (paragraph 8). Choice (B) contradicts the passage because the Negative does acknowledge the need for reform. Choice (C) is incorrect because the Negative never addresses the specific examples used by the Affirmative; instead, the Negative uses alternate, additional examples. Choice (D) is incorrect because the Negative never implies that the Affirmative is uninformed. The correct answer is (A).

15. A

This is a comparison question about the similarities in the two arguments. Both the Negative and the Affirmative state that the cities are in need of reform or reorganization (paragraph 5 and paragraph 7). Therefore, (A) is correct. Choice (B) is incorrect because only the Negative is concerned with preserving fundamental principles (paragraph 12). Choice (C) is incorrect because only the Affirmative wishes to concentrate power into one governing body (paragraph 1).

Choice (D) is incorrect because the balancing of powers is the concern of the Negative only. The correct answer is (A).

16. **D**

This is a comparison question about a perspective the two arguments share. Choice (A) is incorrect because while the Affirmative may think there is one best form of government (commission), the Negative advocates both the cabinet form and mayor and council form (paragraph 8). Choice (B) is incorrect because only the Negative is concerned with states interfering too much (paragraph 10). Choice (C) is incorrect because only the Affirmative wishes to use the commission model. Choice (D) is correct: The Affirmative describes the distinct duties of the cities in paragraph 4, while the Negative claims that the cities have distinct concerns in paragraph 10. The correct answer is (D).

17. The option that correctly completes the sentence for each “Select” option:

Drop-Down Item 1: Subject-verb agreement, pronoun usage, parallelism

Option 1 is correct: The plural verb “are” appropriately agrees with the subject “the members,” which is then appropriately referenced by the plural pronoun “their.” The pronoun is necessary for parallelism in this list structure, since the second item in the list includes a pronoun: “their works of charity.”

Options 2 and 3 are incorrect because they incorrectly use the singular verb “is,” which does not agree with the plural subject “the members.” Option 4 omits the plural pronoun “their,” so this option presents a list that is not parallel.

Drop-Down Item 2: Sentence fragments and run-ons

Option 3 is correct: Appropriate punctuation (a period) separates the independent clause beginning “Clear Image has great experience helping organizations” from the independent clause beginning “For over 5 years we have been at the forefront.”

Option 1 is incorrect: A comma is too weak to divide the two independent clauses and so this option results in a comma splice. Option 2 provides no punctuation between the two independent clauses, creating a run-on sentence. Option 4 does end an independent clause with a period. However, the word “we” after the period is not capitalized, so this option is incorrect.

Drop-Down Item 3 Parallelism

Option 2 is correct: This option keeps the structure parallel with a consistent verb structure throughout the list, and properly uses a comma series and the conjunction “and” to connect the last list item: “We produce content...maintain a watch...and collect news reports.”

Option 1 is incorrect because it omits the conjunction “and” for the last item, resulting in a run-on sentence. Option 3 is incorrect because the construction “produce content...maintaining a watch...collect news reports” is not parallel, as it inserts a gerund (“maintaining”) into the list; it also omits the conjunction “and” for the last item, resulting in a run-on sentence. Option 4 is incorrect because the construction “produce content...major search engines are maintained...and collect news reports” is not parallel, as the list switches from active to passive voice with “engines are maintained.”

Drop-Down Item 4: Pronoun usage

Option 4 is correct: The correct pronoun here should be “we” to match a phrase earlier in the sentence (“the promotional work we have done”).

Option 1 is incorrect: The pronoun “it” is singular, which does not agree with the verb “offer,” resulting in the erroneous construction “it offer.” Option 2 is incorrect: Although “they” is plural and agrees with “offer,” there is no antecedent for this plural pronoun—the nouns “end” and “work” both require the singular pronoun “it,” and while the word “nuances” is plural, if this were the antecedent, the literal translation would then be “give you a sense of the nuances of what the nuances offer,” which is redundant and confusing. Option 3 results in the construction “give you a sense of the nuances of what to offer.” In this option, it is unclear which party is offering the nuances—the writer or the recipient. Because of this lack of clarity, this option is incorrect.

Section 2: Extended Response

As noted in Chapter 10, the Extended Response essay is evaluated based on three traits. You can earn up to 2 points for each trait for a possible maximum of 6. Here, we’ve provided two sample responses to give you an idea of what a score of 1 and 2 looks like for each trait.

Sample Response A

When the marchers on Washington listed their demands, people considered \$2 an hour a “living wage.” Because that would translate to \$18 today, perhaps it is not surprising that workers making a \$7.25 minimum wage today feel they need more money. But, raising the minimum wage has more problems than solutions. It is more sound that the current minimum wage keeps people employed. This is obvious through the statistics and through sound basic economics.

Economists continually debate which is better: to regulate business, and give laws and standards for hiring, and limit the freedom of employers? Or, on the contrary, to allow a completely free and unrestricted market, trusting that the business will work out to what's fair for all. While there have been constant agitations throughout history to raise the minimum wage, it is more evident that these agitations do not always merit action. The current minimum wage is the right one for our present economy, as is evident by basic economics and common wisdom. Even the civil rights marchers in 1963 would have agreed. If they could have foreseen the long-term consequences.

At first glance into the issue before us, the answer is apparent through basic economics. As noted by "How raising the minimum wage might harm workers" much of the argument for the minimum wage increase is aimed at the so-called "megacorporations" but these megacorporations are actually many small businesses that are just trying to get by with a few employees each. If anyone argues for increasing the minimum wage, they are arguing for bankrupting these small businesses, and the small business owner who may have started as a minimum wage worker in the same business, with dreams of owning a franchise.

Even if the franchises might to stay alive, they must do this through laying off some workers and making the others work more. With fewer workers the business still suffers; perhaps the quality of the product goes down and so does the reputation. This is not just a guess, but is based on studies from Canada proving that people lose jobs when the minimum wage goes up too high.

The statistics given by the opponents are sound and convincing. If the studies show that there is a definite correlation between

the median wage and the minimum wage, in terms of good effects, then by all means the economists and lawmakers should listen to that wisdom and not risk the jobs of low-wage workers.

Those who want a higher minimum wage point to how many people hold low-income jobs and the fact that poor people have to buy poor things. But that is just a basic fact of life. Someone has to be at the bottom, and if the minimum wage is raised, then everyone's wages have to go up to compensate.

It is true that minimum wage workers have to work hard for little, and maybe even have to get on welfare. But some possible short-term gains that might be made through a higher wage cannot counterbalance the drawbacks shown by the studies that indicate that a higher minimum wage harms workers. In the final say, definite speeches about class differences and ideals about a perfect economy cannot overcome the fact that hard studies by economists show that minimum wage increases cause a loss of jobs.

Trait 1—Creation of Arguments and Use of Evidence

Score: 1

The writer of this response shows a clear connection to the prompt in the introduction and takes a position opposing an increase in the minimum wage using a rather simplistic analysis: “But, raising the minimum wage has more problems than solutions. It is more sound that the current minimum wage keeps people employed.” The response cites some evidence from the source text to support the central position (as noted by “How raising the minimum wage might harm workers,” much of the argument for the minimum wage increase is aimed at the so-called “megacorporations”) and also references specific

studies mentioned in the source text. There is some analysis of the issue and evaluation of the evidence for the arguments, but it is minimal (“This is obvious through the statistics and through sound basic economics” and “Someone has to be at the bottom, and if the minimum wage is raised, then everyone’s wages have to go up to compensate”). Overall, the writer makes an argument supported by some evidence from the source text with a partial analysis. Therefore, this Response A earns a score of 1 for Trait 1.

Trait 2—Development of Ideas and Organizational Structure

Score: 1

The writer establishes an organizational structure in this response by giving the background of the issue in the introduction, and then taking a position (“But, raising the minimum wage has more problems than solutions. It is more sound that the current minimum wage keeps people employed”). However, the second paragraph just repeats the same information. In paragraphs three, four, and five, the writer cites evidence from the opposing position (“the argument for the minimum wage increase is aimed at the so-called ‘megacorporations,’ but these megacorporations are actually many small businesses that are just trying to get by with a few employees”), but the organization is not clear; for example, the fifth paragraph is just a continuation of the summary of the source-text statistics made at the end of the fourth paragraph. In the second paragraph, a new thought is presented about the ramifications of layoffs (“With fewer workers the business still suffers; perhaps the quality of the product goes down and so does the reputation”). The sixth and seventh paragraphs summarize the “pro”-wage increase position and dismiss these

arguments rather simplistically. The conclusion is a general explanation of why the opponent’s position is better supported. The writer’s word choice is sufficiently competent, and the response’s tone is acceptable. Overall, the response is minimally organized and focused, but suffers from repetition in the early portion of the essay, and from choppy transitions in the later portion. Therefore, Response A earns a score of 1 for Trait 2.

Trait 3—Clarity and Command of Standard English Conventions

Score: 1

This response shows generally correct sentence structure, but with very few errors of sentence fragments (“If they could have foreseen the long-term consequences.”) and lengthy, difficult-to-read sentences (“In the final say, definite speeches about class differences and ideals about a perfect economy cannot overcome the fact that hard studies by economists show that minimum wage increases cause a loss of jobs”), but these errors do not interfere with comprehension. There is generally reliable control of standard English conventions with regard to subject-verb agreement and punctuation usage, so this response is an acceptable example of draft writing. Therefore, Response A earns a score of 1 for Trait 3.

Sample Response B

The federal minimum wage is implemented throughout the United States as the lowest wage that employers can pay their workers. This article presents both the views of the opponents and the supporters of an increased minimum wage. Both sides claim that their position represents better economic sense. Taking into consideration the two positions presented, the one for increasing

the minimum wage from \$7.25 to \$15 per hour makes the better argument.

The minimum wage has been around for a long time (1938), and for a long time folks have been asking for it to be raised; in the 1963 Civil Rights march, for example. What is clear, then, is that the minimum wage does not stay stagnant over time; it responds to the needs of the economy.

The first point that the supporters of an increased minimum wage make is that there are more and more minimum-wage jobs all the time, and as of 2019, low-wage jobs comprise nearly half of all employment opportunities in the U.S. The supporters rightly point out that many of these jobs, including service and food industry work, cannot be automated or outsourced. If the predictions are right, and the minimum wage is not increased, then the nation is well on the way to sentencing half the nation to live in poverty, which would have disastrous consequences for the economy as a whole. The “pro” minimum wage increase position points out that giving more money to the people on the low end of the ladder is exactly the way to safeguard the economy as a whole, since the money that poor people make goes directly back in to the economy as they use their wages to address their immediate needs, and in the process employ other people on the low end of the spectrum. In this sense, giving money to poor people helps poor people. Giving money to rich people does not help nearly as much, as the wealthy do not participate in the economy in the same fashion, or even in the same economy, as the supporters’ article points out.

By far, however, the most compelling reason the supporters give in favor of the minimum wage increase is the fact that low-wage earners fill their wage gaps via social service programs. The

government is giving billions of dollars of assistance to big-box stores and fast-food chains that refuse to pay their workers a livable wage. At this point, the issue of minimum wage is no longer a private matter between employer and employee: we are ALL funding that wage gap with taxes.

Those opposed to a minimum wage increase try to counter the notion that megacorporations are just stingy by insisting that they are really small franchises. But this argument is deliberately vague and misleading. Who set up the franchise system? Whom does it serve? The franchise system is a feudal system that allows the parent corporation to reap all of the profits while evading the responsibilities. There is no law preventing a parent corporation from investing in the employees of the franchise.

Perhaps the only argument from the opponents worth looking at is the sentence "Canadian studies show that workers lose jobs and have increased workloads when the minimum wage is more than half the median wage." Once again, though, the sentence is vague. How much more than half is meant? Since \$15 would be 68% of the current median wage, that is not still within the third quartile. Some more precise numbers would help the opponents' point; as it stands, the argument is weak. Also, the studies are from Canada which has a different economy and different laws from the United States. The application of these studies to this situation is therefore questionable.

Therefore, overall, the arguments against an increase in the minimum wage hold little weight. It may be that there is some validity to the studies quoted, but without further explanation of the nature of the studies, and their application to the United States, this cannot be determined. For that reason, the arguments for an increased minimum wage, with their focus on

the distinct proportions of the U.S. economic make-up and the real numbers of dollar cost to the government, are more convincing.

Trait 1—Creation of Arguments and Use of Evidence

Score: 2

The introduction of this essay gives a background of the issue and contains a clear statement of position (“Taking into consideration the two positions presented, the one for increasing the minimum wage from \$7.25 to \$15 per hour makes the better argument”). The writer reinforces this claim with an analysis of the evidence, first focusing on the strength of the proponents’ argument: “The supporters rightly point out that many of these jobs cannot be automated or outsourced” and “By far, however, the most compelling reason the supporters give in favor of the minimum wage increase is the fact that low-wage earners fill their wage gaps via social service programs.” The writer then moves on to the inadequacy of the opposing argument: “Those opposed to a minimum wage increase try to counter the notion that megacorporations are just stingy by insisting that they are really small franchises.” As further support, the writer introduces alternative interpretations of the evidence (“Who set up the franchise system? Whom does it serve? The franchise system is a feudal system that allows the parent corporation to reap all of the profits”). Finally, the writer critiques the opponents’ use of statistics (“It may be that there is some validity to the studies quoted, but without further explanation of the nature of the studies, and their application to the United States, this cannot be determined.”). Overall, the response offers a well-developed, logical, and organized

argument focused on the validity of the arguments in the source text. Therefore, Response B earns a score of 2 for Trait 1.

Trait 2—Development of Ideas and Organizational Structure

Score: 2

The response shows a clear structure, beginning with some historical facts about minimum wage to introduce the issue, then analyzing what that history indicates (“What is clear, then, is that the minimum wage does not stay stagnant over time; it responds to the needs of the economy”), then highlighting the strong points of the proponents’ argument, and finally dismissing the points of the opponents’ argument. This structure permits a development of generally logical ideas that are sufficiently explored. The response establishes a clear connection between the main idea and supporting details within paragraphs 3, 4, and 5 of the article. The writer points to hypotheses about the structure of the franchise system and then discusses why that structure invalidates the opponents’ claim. The writer uses appropriate vocabulary and formal tone to express ideas, resulting in a response that is structured, focused, and developed. Therefore, Response B earns a score of 2 for Trait 2.

Trait 3—Clarity and Command of Standard English Conventions

Score: 2

This writer demonstrates largely correct sentence structure and competency with several standard English rules. The response makes good use of subject-verb agreement, word usage, and the rules of capitalization and punctuation, and the writer blends simple and complex sentences while maintaining clarity (“But

this argument is deliberately vague and misleading. Who set up the franchise system? Whom does it serve? The franchise system is a feudal system that allows the parent corporation to reap all of the profits while evading the responsibilities.”). Transitional words and phrases are used throughout (“since,” “however,” “by far”). Overall, the response indicates a strong command of the English language, and the level is appropriate for on-demand draft writing. Therefore, Response B earns a score of 2 for Trait 3.

Section 3

18. D

This language use item requires test takers to determine which definition of the word “refined” matches its use in paragraph 2. Each of the answer options reflects an actual definition of the word “refined,” so look closely at the way the word is used in context. The word is used to describe Eliza Allen as “a girl who had refined tastes and wide reading, and who was at the same time graceful and full of humor.” Here, the word “refined” is used in conjunction with the words “wide reading,” so “refined” is used to mean something like “widely read, educated.” Choices (A) and (B) are incorrect because the passage is not claiming that Eliza Allen is “distilled” (A) or “purified” (B). Choice (C) is incorrect: While Eliza Allen *might* be delicate, that is not how the word “refined” is used in this sentence. Finally, (D) is correct because “cultivated” is a characteristic that describes someone who is “widely read.” The correct answer is (D).

19. This character development item asks the reader to identify three adjectives that accurately describe Houston. The three correct adjectives are as follows:

- **Well-regarded.** The fact that Houston was well-regarded is mentioned in paragraph 3: “Houston was the associate of Jackson

and was immensely popular.”

- **Determined.** Houston’s determination is mentioned in several places. In paragraph 11, he says, “What must be, must be.” Furthermore, Houston persists in his course of action despite public outcry (paragraphs 12–13), and paragraph 14 subsequently describes Houston as “self-controlled.” Therefore, the passage clearly indicates that Houston is very determined in the matter of his separation.
- **Secretive.** The passage states that “never, even in his cups, could he be persuaded to say a single word” (paragraph 14).

Eliminate “indiscreet” and “accusing,” since both are the opposites of what paragraph 14 states about Houston’s nature.

20. A

This structure question asks about how the sentences describing Houston’s situation enhance the story. The excerpt uses the phrases “brilliant career” and “attractive prospects” to emphasize that Houston’s situation in life is promising. However, the next sentence poses a question about these “prospects,” indicating that something might “blight his future.” Immediately afterward, the passage begins to relate the tale of Houston’s separation. Altogether, the sense is of a positive description combined with a negative prediction about the future, a prediction that is fulfilled later in the passage. Therefore, (A) is correct: The positive description stands in contrast to the negative developments later in the passage. Choice (B) is incorrect: Although the passage contains details from Houston’s life, these details are about his prospects, not his character. Choice (C) is incorrect: Even though paragraph 3 mentions that Houston was “an associate of Jackson,” this passage does not compare Houston to another

politician. Finally, (D) is incorrect because Houston’s marriage is revealed before this paragraph. The correct answer is (A).

21. **D**

This is a development question about Houston, whose character is discussed throughout the passage. Use the passage to either confirm or eliminate answers based on details in the answer choices. Choice (A) is incorrect: The last sentence of paragraph 14 states that “in later years he sometimes drank deeply,” but doesn’t say this happened frequently. Choice (B) is incorrect because, even though the passage states that Eliza Allen had “refined tastes and wide reading” (paragraph 2), there is no information about whether Houston did or did not have the same qualities. Eliminate (C) because paragraph 14 states, “However his friends might rage, and however her people might wonder and seek to pry into the secret, no satisfaction was given on either side,” meaning that the cause of the separation remained unknown. Choice (D) is correct: Paragraph 1 states that Houston was Governor, and had to “visit different portions of the state,” on the “northern border of Tennessee.” The correct answer is (D).

22. **D**

This structure question asks which sentence from the passage supports the idea that Houston was not accustomed to “refined” society. Since this question asks you to make an inference, consider what is implied as well as what is directly stated. The word “refined” is used in paragraph 2 to describe Eliza Allen, who is also described as a member of the “influential families.” Look for an answer choice that indicates Houston was not used to this kind of society. Choice (A) is incorrect: While this answer indicates that Houston was introduced to the Tennessee “influential families,” it does not indicate that he was unaccustomed to this kind of society, since there is no evidence of

whether he had met similar people before. Choice (B) is incorrect: It indicates that his wife's family was hostile, but this is attributed to the separation, not Houston's unfamiliarity with refined society. Choice (C) is incorrect because this answer choice mentions that he has "attractive prospects" after his marriage. In (D), the phrase "one whose associations had been chiefly with the women of frontier communities" refers to Houston, indicating that he was not accustomed to women like Eliza Allen, who was "refined." The correct answer is (D).

23. **B**

This question asks about the character of Houston as shown through the declaration "What difference does it make to me?" so locate this phrase and read for context in order to link it back to Houston's character. When his friend expresses distress at his separation, Houston utters the phrase "gloomily," and goes on to say "what must be, must be." This reinforces his attitude in paragraph 8 when he replies "grimly." So, the phrase is said with an overall attitude of gloominess or grimness, which highlights Houston's emotion while speaking of his separation. Choice (A) is incorrect: "gloomily" shows that Houston is definitely speaking with emotion, not indifference. Choice (B) is correct because Houston feels grim, or sad, when speaking of his separation, so much that future events do not seem to matter: "what must be, must be." Eliminate (C) because even though Houston is asking a question, it is not out of curiosity, but to make a point about his emotional state. Choice (D) is incorrect because Houston is responding to his friend's predictions, not protests. The correct answer is (B).

24. **A**

This is a structure question about the use of the phrase "gazed at him with horror" in paragraph 6, so locate the detail and consider the

context. The phrase occurs immediately after Houston breaks the news of the separation from his wife in the previous paragraph; the “horror” is his friend’s response to this news. Therefore, (A) is correct: The separation comes as a complete shock to his friend and his expression is one of “horror.” Choice (B) is incorrect because the same paragraph states, “Houston’s friend seized him by the arm,” which he would not do if he were afraid of Houston. Eliminate (C) because this scene does not contain any description of Houston’s appearance or indication that he had become grotesque. Choice (D) is incorrect because immediately following the phrase “gazed at him with horror,” the friend begins speaking (paragraph 7), so he is not speechless. The correct answer is (A).

25. C

This development question asks about the marriage between Houston and Eliza Allen. Since the marriage is the primary subject of the whole passage, use the passage to either confirm or eliminate answers based on details in the answer choices. Choice (A) is incorrect: Paragraph 3 states, “They were surrounded with friends of all classes and ranks.” Choice (B) is incorrect because paragraph 2 states that “few of their friends were surprised when the word went forth that they were engaged to be married,” meaning that the marriage was expected. Choice (C) is correct: Paragraph 3 notes that Houston seemed to have a “brilliant career” ahead, and immediately follows this with “He had won a lovely bride to make a home for him, so that no man seemed to have more attractive prospects.” Furthermore, his friend notes that Houston’s separation will cause “[every one to] fall away” from him (paragraph 7). Therefore, Houston’s marriage had an impact on his public image. Eliminate (D): There is no information about how much Eliza Allen wanted the marriage. The correct answer is (C).

26. This item asks the reader to identify statements that express the author’s purposes for writing this article. The two correct statements:

- **Statement (a): To compare the techniques of storytelling from different cultures.** The author begins the essay with a description of comic, witty, and humorous stories, from England, France, and America, respectively (paragraph 2), and then analyzes the methods of storytelling in the later paragraphs.
- **Statement (d): To satirize the habits of comic storytellers, whether writing or speaking.** The author emphasizes the over-the-top delivery of the comic story (paragraphs 5 and 8) and uses words like “pathetic” and “depressing” ironically juxtaposed with the images of “laughter” and “delight.”

Eliminate statement (b) because Twain is celebrating the “rambling and disjointed humorous story” rather than criticizing it (and always be cautious of answer choices that use identical language to that of the passage, but to different effect). Although in paragraph 7, Twain refers to some expert storytellers, that brief reference does not make it his main purpose, so statement (c) can be eliminated. Statement (e) doesn’t work, since Twain says in paragraph 4 that the humorous story is a work of art, but the comic and witty stories are not.

27. A

This development question asks why the author uses this sentence to conclude the essay. This sentence immediately follows the over-the-top storytelling technique of the comedic storyteller (paragraph 8) that the author is satirizing. Therefore, (A) is correct—the designation “very depressing” shows weariness from the heavy-handed delivery of the comedic storyteller. Choice (B) is incorrect—the author seeks to make a point about the futility of the comedic storytelling method, not his own mental state. Choice (C) is too extreme—“immoral” is too

strong a word for the author’s satirical view of the comedic storyteller, and the author is praising, not criticizing, the humorous storyteller. Choice (D) is also incorrect—storytelling as a profession is not under discussion. The correct answer is (A).

28. C

This language use question asks the reader to examine the use of the term “difficult” to describe the humorous story in paragraph 2. The author expands this idea in paragraphs 4 and 5: “The humorous story is strictly a work of art—high and delicate art—and only an artist can tell it...The humorous story is told gravely; the teller does his best to conceal the fact that he even dimly suspects that there is anything funny about it.” Therefore, (A) is incorrect—the difficulty is in the execution—the telling of the story—rather than in any “depressing” effect on the teller. Choice (B) is also wrong because it doesn’t describe what makes telling a humorous story difficult, only what will happen if it is done incorrectly. Choice (C) is correct—the humorous story takes patience and self-control to deliver. Choice (D) is incorrect—there is no mention of formal study to learn the form. The correct answer is (C).

29. A

This main idea question asks about the central theme of the essay. Early in the essay, the author asserts: “The humorous story depends for its effect upon the manner of the telling; the comic story and the witty story upon the matter” (paragraph 2). So (A) is correct—it correctly juxtaposes the “manner” (style) and “matter” (substance) in the same fashion as the author does. Choice (B) is wrong because the author never asserts that stories must be based on truth. Choice (C) contradicts the author, who contrasts the truly “humorous” story, which only an “artist” can accomplish, with the “comedic” story, which “anyone” can do. Choice (D) also contradicts the author, who

asserts that the humorous story is found only in America. The correct answer is (A).

30. This development item asks the reader to make specific comparisons between similar topics and place the correct details into the correct categories. The correct assignment of details to categories is:

The humorous story

- **(c) It is told seriously. (Paragraph 5)**
- **(e) The listener must be alert at the end. (Paragraph 6)**

The comic story

- **(f) It must be brief. (Paragraph 3)**
- **(d) Anybody can tell it. (Paragraph 4)**

Statement (a) refers to Twain’s essay, not the types of stories he discusses. Statement (b) can be eliminated because both types of stories have points; they are just put forth in different ways.

31. **B**

This development question asks about how the author makes his point about the different types of stories. Choice (A) is incorrect because an analogy highlights how items are alike, and the author instead makes a contrast between the stories of America and those of England and France. Choice (B) is correct—the author uses imagery like “burst,” “shouts,” “whooping,” and “exclamation” to describe the comedic storyteller, and imagery like “delicate” and “bubbling” to describe the humorous story. Choice (C) is incorrect—the author mentions experts of only the humorous story form, not the other types. Choice (D) contradicts the author, who states, “I do not claim that I can tell a story as it ought to be told” (paragraph 1). The correct answer is (B).

32. **B**

This structure question asks about the author’s feelings regarding writers and tellers of comedic stories in England, France, and Germany. The author satirizes these tellers in the last paragraph by emphasizing how these tellers spoil a joke with too much emphasis on the punchline. Therefore, (A) is incorrect and (B) is correct. Choice (C) contradicts the author, who states, “The art of telling a humorous story—understand, I mean by word of mouth, not print—was created in America” (paragraph 4). Choice (D) reverses the methods of these European storytellers and the methods of the humorous story, so this choice is incorrect. The correct answer is (B).

33. This development item asks the reader to identify three adjectives that accurately describe the author. The three correct adjectives are:

- **Modest.** In the first paragraph, the author states, “I do not claim that I can tell a story as it ought to be told,” indicating modesty about his own abilities.
- **Satirical.** The author uses grandiose exaggeration to convey a dislike of the comic story.
- **Belittling.** When describing the teller of the comic story, the author writes, “It is a pathetic thing to see” (paragraph 5), and the author looks down on the method of comic story.

Though Twain disapproves of one kind of story and appreciates another, both “angry” and “delighted” are too strong and emotional to be accurate descriptions of him.

34. This plot development question item asks the reader to arrange the sequence of events in the excerpt in order in a chart. Here’s the correct order from first to last:

1. **Event (d): The quarry is deserted.** This occurs early in the narrative in paragraph 1: The first sentence says “The Hollow for which they were bound lay in a deserted stone quarry.”
2. **Event (b): Stephen objects to his father.** Following the general description of the quarry, the party prepares to skate. When Stephen’s father warns the others away from the quarry, Stephen responds, ““Oh, we fellows have skated in the quarry millions of times, Dad,”” (paragraph 6).
3. **Event (a): The lake ice breaks.** After skating into the quarry, Stephen falls through the ice: “What followed was all over in a moment—the breaking ice and the plunge into the frigid water.” (paragraph 15).
4. **Event (c): Stephen is at home.** After Stephen falls through the ice, the next scene begins “When he next opened his eyes it was to find himself in his own bed with a confusion of faces bending over him.” (paragraph 17).

35. **B**

This development question asks about the skating trip. Since the skating trip is the primary topic of the narrative, use the passage to either confirm or eliminate answers based on details in the answer choices. Choice (A) is incorrect because Stephen skates to the quarry without planning it: “He never could explain afterward just how it happened that he found himself around the bend of the quarry” (paragraph 15). Choice (B) is correct: In paragraph 18, someone says “He is safe now, Tolman. Don’t you worry! You’d better go and get off some of your wet clothing.” The “Tolman” referred to is Stephen’s father; his wet clothes and the assurance that Stephen is safe both imply that Mr. Tolman pulled Stephen from the water. Choice (C) might be tempting because the quarry is indeed both deserted and

unsafe; however, this choice is incorrect: The quarry is deserted because it is far from town (paragraph 1). Choice (D) is incorrect: Although Mr. Ackerman jokes that he might “renew [his] youth” (paragraph 3), there is nothing to indicate the trip was made for this purpose. The correct answer is (B).

36. A

This structure question asks which quotation from the passage supports the idea that Stephen’s father is not the only adult in the skating party. Since several quotations are related to the major theme of the skating party, consider what is implied as well as what is directly stated. Choice (A) is correct: This quotation is found in paragraph 3 and is stated by Mr. Ackerman, suggesting that he is no longer young. Choice (B) may be tempting because it distinguishes “young people,” but this quotation by itself does not indicate that there are adults in the party as well. Choice (C) is incorrect because, while this indicates that there are more people in the party besides Stephen’s family, Dick is not presented as an adult. Although (D) indicates that someone is addressing Mr. Tolman in an informal fashion (“He is safe now, Tolman!”), suggesting an adult, this occurs away from the quarry “in his own bed” and so the speaker may not have been in the skating party. The correct answer is (A).

37. C

This language use item requires you to determine which definition of the word “cherished” matches its use in paragraph 14. Each of the answer options reflects an actual definition of the word “cherished,” so look closely at the way the word is used in context. The word is used as a part of the sentence “Indeed, one could not long have cherished ill humor amid such radiant surroundings,” and is followed by “There was...too much jollity and happiness.” Thus, ill humor is not possible because of too much happiness so one could not long

have “held on to” it. Look for a word that means “held” or “kept” in the answers. Choice (A) is incorrect because “preserved” means “kept from damage.” It would not make sense to say “could not long have kept from damage ill humor.” Choice (B) is not quite right because embraced means “hugged” or “happily accepted,” and “could not long have happily accepted ill humor” doesn’t make sense with the following “too much jollity and happiness.” Choice (C) is correct because harbored means “kept” or “made a place for”; consequently, “could not long have made a place for ill humor” is consistent with “too much jollity and happiness. Finally, (D) is incorrect because this would result in “could not long have honored ill humor.” The correct answer is (C).

38. **D**

This character development item requires making an inference about Dick based on an overall understanding of the details that relate to him. Dick appears in the narrative in paragraph 11, so use the details in this paragraph to eliminate answers that don’t conform to the passage. Choice (A) is incorrect: Since Dick says “your father” to Stephen, this suggests that Stephen and Dick do not share the same father. Choice (B) is incorrect because there is no evidence that Mr. Ackerman is Dick’s father. Choice (C) may be tempting because Dick does disagree with Stephen. However, Dick says, “Whether it is safe or not has nothing to do with it,” so eliminate this answer. Choice (D) is correct because Stephen claims “I know this pond better than he does,” (paragraph 10), meaning that his father should listen to Stephen. In contrast, Dick says, “If your father says not to skate there that ought to go with you,” advising Stephen to obey Mr. Tolman because his father’s desires should be enough—the issue of safety is irrelevant. The correct answer is (D).

39. **A**

This structure question asks about how the sentence describing the landscape enhances the story. The passage offers a very specific description of the quarry to set the scene for the skating narrative that follows: “at one end a deep pool; from this point the water spread itself over the meadows in a large, shallow pond.” This description gives the necessary context for the reader to understand the physical layout of the scene. Therefore, (A) is correct because this description is the reason Mr. Tolman later claims in paragraph 5 that parts of the skating area may be unsafe while others are safe: the depth of the water varies. Choice (B) is incorrect: While paragraph 1 does state that an arm of the river had penetrated the quarry, this is not a geological history of the area. Choice (C) contradicts the passage because paragraph 1 states, “Had the spot been nearer the town it would doubtless have been overrun with skaters,” so eliminate this answer. Even though the skating area is formed by a river, nothing indicates the group had to cross this river, so (D) is incorrect. The correct answer is (A).

40. This character development item asks the reader to identify three adjectives that accurately describe Stephen. The three correct adjectives are as follows:

- **Cheerful.** Even though Stephen begins by being irritated by his father, this feeling changes to enjoyment: “Stephen’s irritation had vanished and he was speeding across the glassy surface of the ice as gay as the gayest of the company” (paragraph 14).
- **Disobedient.** Stephen does disobey his father, though he does not plan to: “He had not actually formulated the intention of slipping away from the others and invading this forbidden spot. Nevertheless, there he was...” (paragraph 15).
- **Terrified.** Stephen is terrified that he will die after falling through the ice: The description of his thoughts at the end of paragraph 15

and the phrase “With a piercing scream he made one last desperate lunge” (paragraph 16) all indicate his extreme fear.

The other two adjectives might be tempting, but we can eliminate both by reading critically: while Stephen is irritated at first, he is not irritating to others. Nor is he a daredevil: since he does not think the quarry is dangerous, he does not see himself as taking a risk, which is a necessary component of being daredevil.

41. C

This structure question asks why the author chose to use a certain phrase, so locate the detail and consider the context of the surrounding text. The phrase occurs in paragraph 17: “When he next opened his eyes it was to find himself in his own bed with a confusion of faces bending over him.” This sentence occurs right after the description of Stephen’s fall through the ice, so the “he” in paragraph 17 is Stephen, who is just waking up after the traumatic experience, and the “confusion of faces” represents what he sees upon waking. Choice (A) is incorrect: The use of “Tolman” in the following paragraph refers not to Stephen but his father, who was named Mr. Tolman in paragraph 5. Eliminate (B) because the “confusion” represents what Stephen sees, not how he looks to others. Choice (C) is correct: Stephen is disoriented after the traumatic experience, so what he sees as he just awakens is confusing to him. Choice (D) is incorrect because those around Stephen may not be strangers: The use of the phrase “confusion of faces” indicates that Stephen cannot immediately tell who is around him; whether or not they are familiar faces, they are unrecognizable at first. The correct answer is (C).

42. The option that correctly completes the sentence for each “Select” option:

Drop-Down Item 1: Pronoun usage, subject-verb agreement

Option 1 is correct: The compound subject “His work...and the knowledge” is plural (two items: work and knowledge), so the plural form “earn” is appropriate. Also, the singular objective pronoun “him” is appropriately used to refer to “Ron.”

Option 2 is incorrect: The verb “earns” would agree only with a singular subject. The subject in this sentence is plural (“work” and “knowledge”). Therefore, the verb must also be plural. A singular subject takes the verb *earns*; a plural subject takes *earn*. Option 3 is incorrect: The pronoun “them” is plural, and does not agree with the antecedent “Ron”; instead, this option makes it appear as if the “work and knowledge” are the subjects that are receiving “many referrals,” which is confusing. Option 4 is incorrect: In this option, the verb “earns” does not agree with the plural subject, and the pronoun “them” does not properly refer to “Ron.”

Drop-Down Item 2: Misplaced modifiers or illogical word order

Option 3 is correct: In this sentence, the adverb “ceremoniously” is correctly placed next to the verb “will present,” which it modifies. The subject of the verb “will present” is “Ron,” which correctly agrees with the following pronoun construction “his colleague.”

Option 1 is incorrect: in this option, the placement of the word “ceremoniously” is confusing: it appears to modify the phrase “at the party” when it should modify the verb “will present.” Option 2 is incorrect: here, Ron’s presentation is described as “ceremonious to” his colleague, Belle, rather than ceremonious in general, which is not the intended meaning of the passage. Option 4 is incorrect: in this option, the subject of the sentence is now “Ron’s workstation” resulting in a passive construction with a confusing mix of pronouns (“will have its password ceremoniously presented to his colleague”).

Drop-Down Item 3: Parallelism, run-on sentences, and sentence fragments

Option 4 is correct: This option keeps the structure parallel with a consistent verb structure throughout the list, and properly uses a comma series and the conjunction “and” to connect the last list item: “his colleagues, his project managers, and his long-time clients.”

Option 1 is incorrect because it results in the construction “his colleagues and project managers and his long-time clients,” which creates a run-on structure with the unnecessary overuse of the word “and.” A list of more than two items should be set off with commas and use “and” to connect the last items. Option 2 is incorrect because this option breaks up the list, separating a dependent clause from the rest of the sentence with a period, forming the sentence fragment “His long-time clients, providing guidance necessary to make his transition to retirement as smooth as possible for all parties.” Option 3 is incorrect because this option provides an extra comma after the word “and.”

Drop-Down Item 4: Possessives and the placement of apostrophes

Option 2 is correct: In this sentence, the word “company’s” is appropriately singular and possessive, indicating that the “best performance” belongs to the company.

Option 1 is incorrect because it is singular but omits the possessive. Option 3 is incorrect because it is possessive but improperly uses the plural form. Option 4 is incorrect because it is plural and omits the possessive.

This evaluation question asks about the reason President Taft mentioned the fraction of timber owned by public organizations in his address. In paragraph 2, Taft mentions that the government owns only one-fourth of all the country's timber, and states, "Only three percent of that which is in private ownership is looked after properly and treated according to modern rules of forestry. The usual destructive waste and neglect continue in the remainder." Therefore, the mention of the small fraction of public timbered lands highlights the larger proportion of private lands, which are maintained with "waste and neglect," so (A) is correct. Choices (B) and (C) may be tempting because the limitations on forests reserved for public use and "lands which are not properly forest land" are discussed in paragraph 1. However, the fraction of timber that is Government timber is specifically presented in paragraph 2, which is about the neglect and poor management of forests not on public land, so eliminate these choices. Choice (D) is incorrect because President Taft declares such federal laws are "beyond the jurisdiction of the Federal Government," not that the fraction of timber is too small to enact the laws. The correct answer is (A).

44. **B**

This evaluation question asks about the approach the author of the report by the Western Forestry and Conservation Association takes to support the idea that northwestern forest owners have effective conservation practices. Therefore, find the quoted material in the paragraph and locate the information given in support of this idea. In paragraph 9, the author states, "we have controlled our countless fires so that actual disasters can be counted on the fingers, and our loss as a whole is insignificant—we feel that no one has done more to prove his willingness and competence to practice Conservation that counts." This assertion immediately follows statistics that show the number of fires that have been controlled compared to the relatively small

amounts of loss. Choice (A) is incorrect: There are no multiple definitions of “conservation” in this article. Choice (B) is correct: The author uses statistical evidence to prove that the private owners are effective at protecting forest lands. Choice (C) may be tempting because the author did compare the Forest Service to the private fire patrols in paragraph 7; however, the author just says these groups are “equally trained” and does not compare their numbers. Choice (D) is contradictory because paragraph 8 claims the methods in the National Forests are “excellent,” so eliminate this answer. The correct answer is (B).

45. A

This structure question asks why the author chooses that sentence to conclude the report in responding to President Taft. So, consider the role the last sentence plays in Article 2 as a whole, and how that relates to Article 1. The “northwestern forest owners” are the private landholders. In Article 1, President Taft claims that the management of the privately owned forests is neglectful (paragraph 2). By contrast, the last sentence of Article 2 asserts that “no one has done more to prove his willingness and competence to practice Conservation that counts than the northwestern forest owner,” so this concluding sentence is a refutation of Taft’s suggestion that the private owners are neglectful. Thus, (A) is correct. Choice (B) is incorrect because the purpose of the sentence is not to define “conservation” but to defend the owners. Eliminate (C) because this particular sentence is a defense of the private owners, not a criticism of the government. Choice (D) is contradictory: The report advocates *for* more legislation. The correct answer is (A).

46. This item asks the reader to make specific comparisons between similar themes or topics and place the correct details into the correct

categories. The correct assignment of details to categories is as follows:

President Taft's Address

- **Phrase (a): There are lands which should be removed from the forest reserves.** Paragraph 1 states, “In the present forest reserves there are lands which are not properly forest land, and which ought to be subject to homestead entry. We are carefully eliminating such lands from forest reserves.”
- **Phrase (b): States should make laws for fire safety.** In paragraph 2, Taft states, “If anything can be done by law it must be done by the State legislatures. I believe that it is within their constitutional power to require the enforcement of regulations.”

E.T. Allen's Report

- **Phrase (c): Private fire patrols are more costly per acre than National Forest patrols.** Paragraph 8 states, “They handle the fire situation in a much better and more comprehensive manner than even the Government has ever done because they spend three times as much money per acre for patrol.”
- **Phrase (d): The private Northwest forest owners have an imperfect fire safety system.** Paragraph 9 of Article 2 states, “Our own system is by no means perfect yet.”

47. **D**

This comparison question asks the reader to examine the structural relationships between the two articles, so look at the organization of each article. Article 1, the president's address, gives some background information about forested lands, public and private, and then brings up the problem of waste and mismanagement. Article 2, the

report, starts with the warning “The great danger now is that our resources will disappear while we are deciding to whom they shall belong,” and then goes on to discuss forest fire measures in great detail. Choice (A) is incorrect, because E. T. Allen’s article does not defend the limitations on national reserved forests. Eliminate (B) because Article 2 claims the solution to the problem of fire is “better laws” (paragraph 8), so this answer is contradictory. Choice (C) is incorrect, because President Taft says “Exactly how far these regulations can go and remain consistent with the rights of private ownership, it is not necessary to discuss” (paragraph 3). Choice (D) is correct because it accurately reflects the structures of both articles: The president’s address spends as much time on the classification of forest lands as on the problems of mismanagement, whereas E. T. Allen’s report focuses almost exclusively on fire prevention and management in forests. The correct answer is (D).

48. **D**

This point of view question asks about President Taft’s attitude concerning the laws regarding the regulation of forested lands, so locate the specific information in the passage. In Article 1, President Taft asserts that the federal government should not make laws to regulate the management of privately owned forested lands (paragraph 2), and if any laws are made, the States should make them. Choice (A) is incorrect because the President states, “No further legislation is needed at the moment except an increase in the fire protection to National forests” (paragraph 4). Eliminate (B) because it contradicts President Taft’s assertion that the States must make the laws. Choice (C) can be eliminated because it contradicts paragraph 1: “I expect to recommend to Congress that the limitation herein imposed shall be repealed.” Choice (D) is correct: President Taft states, “The management of forests not on public land is beyond the jurisdiction of the Federal Government” (paragraph 2). The correct answer is (D).

49. D

This question asks which sentence from the passage best expresses the primary purpose of the president's address, so look at the overall structure and theme of Article 1. The address gives some background information about forested lands, public and private, and then brings up the problem of waste and mismanagement. Look for an answer choice that expresses these two major themes. Choice (A) is incorrect because while lawmaking is an important part of the president's address, this sentence does not express the ideas of allocations of lands. Eliminate (B) because this sentence merely introduces the topic by giving the total number of acres of public forests. Choice (C) is incorrect: This sentence emphasizes the idea of mismanagement, but doesn't encompass the entire theme. Choice (D) is correct: This sentence occurs in the conclusion of the president's address and expresses the president's evaluation of legislation, forest management problems (fire protection), and classification of forest lands (forest reservations). The correct answer is (D).

50. C

This question asks about the purpose of the forest homestead act. Since this is a detail question, locate the specific information and verify each answer choice against the passage. The phrase appears in paragraph 1: "We are carefully eliminating such lands from forest reserves or, where their elimination is not practicable, listing them for entry under the forest homestead act." The "such lands" refers to the "lands which are not properly forest land" in the previous sentence. Choice (A) is incorrect because the passage does not mention pioneers or the intentions of the act. Choice (B) is incorrect because again there is no information about why the act was passed. Choice (C) is correct: The act apparently allows the government to classify forest lands in another way under the "forest homestead act." Choice (D) is incorrect:

Even though the government controls one-fourth of the timbered lands, the forest homestead act would be used only for those “lands which are not properly forest land.” The correct answer is (C).

MATHEMATICAL REASONING

Part 1

1. C

Check your Formula Sheet. Volume Pyramid = $\frac{1}{3} Bh$. B refers to the area of the square base of the pyramid and is given as 50,000 and $h = 150$, so simply apply the formula. So $\frac{1}{3} \times 50,000 \times 150 = 2,500,000$.

Since you don't have a calculator for this question, it will be much easier if you calculate $\frac{1}{3} \times 150 = 50$ (to get rid of the fraction) and then multiply 50 by 50,000.

2. B

If the woman sleeps 6 hours, then she is awake for $24 - 6 = 18$ hours per day. She works $\frac{4}{9}$ of this, so she works $\frac{4}{9} \times 18 = 8$ hours per day.

The question asks for what fraction of the total day she works, so divide the hours she works by the total hours in a day. $\frac{8}{24} = \frac{1}{3}$.

3. <

Since more than half the students scored below a 76, the median score (the score of the middle student) must be below 76. The median

cannot possibly be equal to or greater than 76, so the correct expression is $\text{median} < 76$.

4. C

The total cost of the labor should be the rate per worker multiplied by the number of workers and the number of hours, $\$50 \times 3 \times 2$.

Eliminate (A) and (B). The cost for mileage should be the mileage rate multiplied by the number of miles. So the correct answer is $\$50 \times 3 \times 2 + 40 \times (\$0.50)$.

5. 3

She earned \$15 in interest, so you must determine what % of \$500 this is. Percentage means “amount per 100” so the easiest solution is to use a proportion to find out how much interest she earned for each

\$100 in her account: $\frac{\$15}{\$500} = \frac{x}{\$100}$. Either reduce the fraction on the

left by canceling 5 from both the top and bottom to determine that

$\frac{\$3}{\$100} = \frac{x}{\$100}$, or cross-multiply and then divide to find the value of x .

Either way, $x = 3$.

Part 2

6. B

Multiply the number of miles per hour, 65, by the maximum number of hours per day, 9, to determine the maximum distance the driver can travel each day: $9 \times 65 = 585$. Since the total distance is 4,287, divide this by the distance per day to get the number of days: $4,287 \div 585 \approx 7.3$. So the trip cannot be completed in 7 days, but will require at least 8.

7. B

A barrel is a cylinder, so write down the formula from the Formula Sheet: $V = \pi r^2 h$. Notice also that the diameter is currently given in inches, so you will need to convert 24 inches to 2 feet. Since the diameter is 2, then the radius is 1. Now use the formula. $V = \pi \times 1^2 \times 4 = 4 \times \pi \approx 12.6$.

8. **greater than**

The sum of two sides of a triangle is always greater than the length of the third side. If you chose “equal to the square of,” you were thinking of the Pythagorean Theorem, but that formula would require the sum of the squares of the other two sides, not just the sum of the other two sides.

9. **A**

According to the graph, the length of AB is 3 units, and the length of BC is 4 units. Therefore, by the Pythagorean Theorem, the length of the hypotenuse is 5 units. The area of the triangle is $\frac{1}{2}bh = \frac{1}{2} \times 3 \times 4 = 6$ square units. The question asks for the difference between the numerical values of the two (excluding their units), which means subtraction, so the answer is $6 - 5 = 1$.

10. **D**

At 90° , the stand brings in approximately 500 per hour. At 100° , it brings in 1,000 per hour. The difference is 500. Multiplied by 3 hours, the total difference in revenue is 1,500.

11. **A**

If the temperature rises at a constant rate, then the average temperature will be the midpoint between 70 and 95, which is 82.5. At that temperature, the stand is bringing in more than \$250 per hour. Since revenue also rises more quickly during the warmer part of the day (the slope of the curve is steeper on the graph), it follows that the stand will average more than \$250 per hour. Choices (C) and (D) are factually incorrect, whereas (B) does not contain information useful to making this decision.

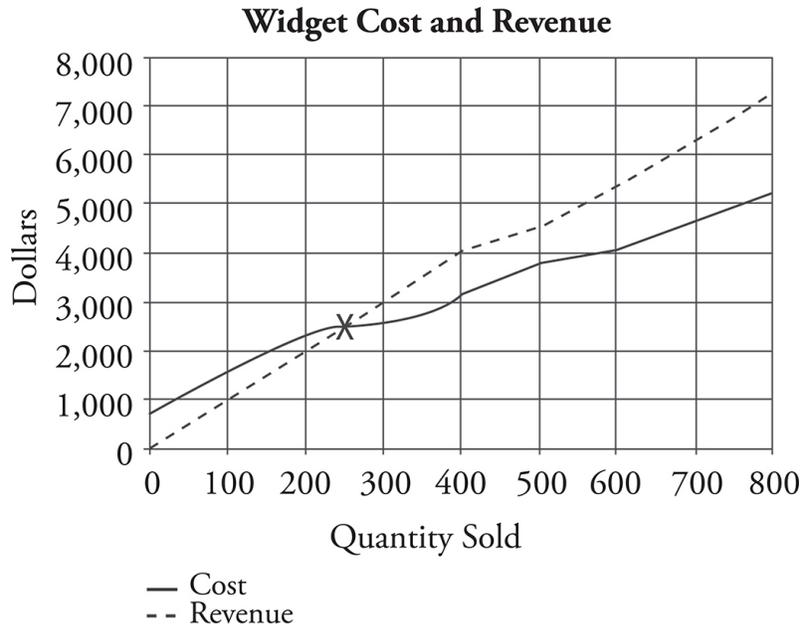
12. **C**

The measures of the three angles of a triangle total 180° . If two of the angles measure 60° each ($60^\circ + 60^\circ = 120^\circ$), the third angle must also measure 60° ($180^\circ - 120^\circ = 60^\circ$). If all three angles have equal measure, then all three sides must have equal length. Since side AB has length 4 inches, the other two sides, AC and BC , also have lengths of 4 inches each. $AC + BC = 8$.

13. **D**

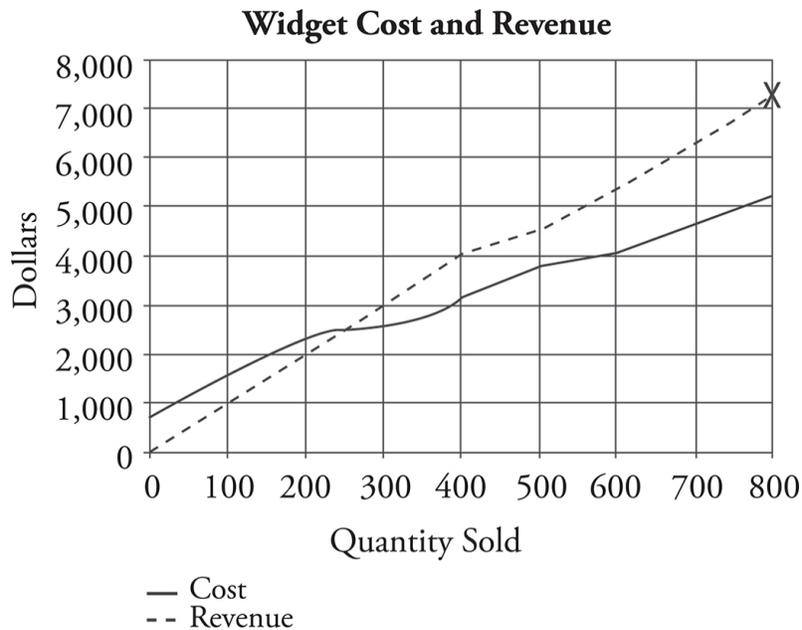
Use the Pythagorean Theorem to find side c : $a^2 + b^2 = c^2$. So $(5)^2 + (12)^2 = c^2$. Then $25 + 144 = c^2$ and $169 = c^2$. Finally, $13 = c$. Since the new ramp is going to be twice as high off the ground, but the angles will be the same, each side of the triangle will be twice as long. The new ramp will be $13 \times 2 = 26$ feet long.

14.



The widget factory will lose money wherever cost is greater than revenue. The minimum number of sales, therefore, that will not lose money is where the revenue line crosses the cost line at Quantity Sold ≈ 250 .

15.



In order to make a profit of \$2,000, the widget factory must sell enough widgets that Revenue dollars exceed cost by 2,000. So, we need to find where the dotted revenue line is that much higher than the solid cost line. On the chart, each interval on the y -axis is \$1,000, so \$2,000 represents two grid intervals' difference. Look at the chart for a place where the revenue line is two full intervals above the cost line. The profit reaches this level only at Quantity = 800.

16. Menu 1: twice. Menu 2: four times

The radius of the smaller circle is 2 and the radius of the larger circle is 4. Therefore, the diameter of the small circle is 4 and the diameter of the large circle is 8. The area of the smaller circle is $\pi r^2 = \pi \times 4 = 4\pi$. The area of the larger circle is $\pi r^2 = \pi \times 16 = 16\pi$, which is four times the area of the smaller circle.

17. C

The point on the larger circle with the greatest y -value is (2, 6). The point on the smaller circle with the least y -value is (2, 0). The distance between these points is 6.

18. A

For a rate question, use the formula $Distance = rate \times time$. The question has one extra step, however, because the rate and time are given in different units: hours versus minutes. At the beginning of the problem, choose the unit that will be simpler to use, and convert all "time" measurements to that unit. In this situation, divide 12 minutes by 60 minutes per hour to get 0.2 hours. Now $distance = rate \times time = 280 \times 0.2 = 56$.

19. B

The weight of the empty can, C , is equal to the weight of the full can (w) minus the contents of the can (f). If we express the sentence as an equation, we get $C = w - f$.

20. **D**

The smaller squares have sides that are exactly $\frac{1}{2}$ the side length of the larger square, so each side of the smaller square will be 2.5 inches. There are a total of 16 sides to the 4 small squares, so the total perimeter is $16 \times 2.5 = 40$ inches.

21. **D**

$\frac{1}{5}x = 15$ so multiply both sides by 5 to get $x = 75$. Now calculate $\frac{4}{3} \times 75 = \frac{300}{3} = 100$.

22. **C**

Be sure that you apply the fraction to the correct number. The question says $\frac{2}{9}$ of the total, not $\frac{2}{9}$ of the normal marbles. The easiest method is to plug in the answers, particularly if you notice that you need an answer choice divisible by 9 (the number of marbles must be an integer). Try out one of the middle answers: 108. In this case, $\frac{2}{9} \times 108 = 24$, the number of jumbo marbles. Since $84 + 24 = 108$, this is indeed the correct answer. If you solved with algebra, your equation should be $(\frac{2}{9} \times total) + 84 = total$.

23. **C**

To calculate average, take the total salary over the 8 years divided by the number of years. Total salary will be $(\$45,200 \times 3) + (\$55,400 \times 5) = \$135,600 + \$277,000 = \$412,600$. Now divide the total by 8 to get \$51,575.

24. **B**

First calculate the total cost, which is equal to the base cost plus the rate cost. Since there are x legionnaires and each adds \$5 to the price, the total cost = $400 + 5x$. However, the question asks for the total cost per legionnaire. “Per” always means division, so you must divide by x , the number of legionnaires. $C = \frac{\$400 + 5x}{x}$.

25. **5.5**

The perimeter is the sum of the three sides, so add up the three sides algebraically to get an equation for perimeter. Side AB + Side AC + Side $BC = 27$. Substitute the algebraic expressions for each side: $(2x) + (x - 1) + (3x - 5) = 27$. Drop the parentheses and combine like terms: $6x - 6 = 27$. Now solve: $x = 5.5$.

26. **$A < C < B$**

In any triangle, the smallest angle will also be opposite the smallest side and the largest angle will be opposite the largest side. Since $x = 5.5$ (calculated in the previous question), substitute that value into each expression to find that the three sides are 4.5, 11, and 11.5. Angle A is opposite a side of length 4.5, so angle A is the smallest. Angle B is opposite a side of length 11.5, so angle B is the largest.

27. **D**

First calculate the total number of cows: $245 + 35 = 280$. Now set up a ratio of feed to cows: $\frac{200 \text{ lbs}}{35 \text{ cows}}$. Write a proportion with the ratio you are given on one side and a ratio with the quantity you are looking for on the other, making sure to keep the pounds of feed in the numerator and the number of cows in the denominator: $\frac{200}{35} = \frac{x}{280}$. Cross-multiply the fractions and solve for x . $200 \times 280 = 35x$ and $x = 1,600$.

28. **A**

The actual fee will be greater than expected because of the extra 27 (i.e., $377 - 350$) people. Since the cost per person is \$6, just multiply 27 by \$6 to get \$162.

29. **A**

The formula for the midpoint is $\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}$. You can think of this midpoint formula as finding the mean (average) of the x -coordinates and the average of the y -coordinates. Plugging into the formula, we get $\left(\frac{5 + (-1)}{2}, \frac{(-4) + 2}{2}\right)$, which simplifies to $(2, -1)$.

30. **D**

The equation of a line is written in form $y = mx + b$, where m is the slope and b is the y -intercept. First calculate the slope, using the

formula $m = \frac{y_2 - y_1}{x_2 - x_1}$. (This formula is provided on the Formula Sheet.) So $m = \frac{2 - (-4)}{(-1) - 5} = -1$. The answer must be either (C) or (D).

Plug in one of the given points into the equation $y = (-1)x + b$ in order to solve for b . So $-4 = (-1 \times 5) + b$ and $b = 1$. Note that you could also just plug both of the given points into each equation in order to find the only answer choice for which both points would work.

31. Total = $(15 \times (2,800 + p)) + ((15 - z) \times p)$

The total payroll will be the sum of the payroll for associates and the payroll for paralegals. Solve for each independently to figure out where to enter appropriate terms in the equation. Payroll for associates is equal to the number of associates multiplied by the average payroll for associates. The average pay for associates is \$2,800 more than p , or $(2,800 + p)$. This must go within the parentheses in the first term of the equation. Therefore, the first blank in the first term must be the number of associates = 15. The second term of the equation now must be the payroll for paralegals. Since the firm employs z more new associates than new paralegals, the number of new paralegals is $15 - z$. The average pay per new paralegal is p . So place z in the first blank and p in the second blank of the second term.

32. C

Set up a proportion relating distance on the map to actual distance. We know that 0.4 miles on the map corresponds to 100 miles in actual distance, so $\frac{0.4 \text{ inches}}{100 \text{ miles}} = \frac{7.4 \text{ inches}}{y}$, where y is the real distance

between the craters. Solve for y by cross-multiplying: $(0.4)y = 100 \times 7.4$ and $y = 1,850$.

33. % Increase of **Grosbeaks** < % Increase of **Harriers** < % Increase of **Cardinals**

The three bird types that showed an increase in sightings are Cardinals, Grosbeaks, and Harriers. To calculate percentage increase, take the difference between number of sightings for the two years divided by the original number of sightings in 2008 for each type of bird. Multiply by 100 to get a percent. Cardinals % increase = $\frac{7}{24} \times 100 \approx 29.2\%$. Grosbeaks % increase = $\frac{4}{19} \times 100 \approx 21.1\%$. Harriers % increase = $\frac{7}{31} \times 100 \approx 22.6\%$.

34. **B**

To calculate percentage increase, take the total increase in sightings divided by the original 2008 total sightings, and multiply by 100. The 2008 sightings (adding the five types) total 142. The 2009 sightings total 153. So the increase in sightings is 11. Therefore, % Increase = $\frac{11}{142} \times 100 \approx 7.7\%$. The question asks you to round to the nearest integer, so the answer is 8%.

35.

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Migration Sightings			
Bird Type	2008	2009	2010
Cardinal	24	31	38
Finch	40	37	34
Grosbeak	19	23	27
Harrier	31	38	45
Sparrow	28	24	20

This question asks you to find the change in sightings between 2008 and 2009, and to continue the pattern (an arithmetic sequence) for 2010. So, for example, Cardinals increased by 7 from 2008 to 2009. In 2010, therefore, Cardinals should increase 7 more to 38.

36. **A**

Since Harold invests \$24,000 at 3% interest, his interest earnings are $\$24,000 \times 0.03 = \720 . Maude invests \$8,000 ($\frac{1}{3}$ of \$24,000) at 8% interest, so her earnings are $\$8,000 \times 0.08 = \640 . The difference is \$80.

37. **D**

Plug in the answer choices to find the choice that does not fit the inequality. $2 \times 3^2 - 3 = 15$, and $15 - 3 = 12$. Since 15 is not less than or equal to 12, $x = 3$ does not fit the inequality.

38. **A**

Circumference = $2\pi r$. The length of each pizza slice, extending from edge to center, is equivalent to the radius. So for the larger pizza, 27π

$= 2\pi r$ and $r = 13.5$ For the smaller pizza, $22\pi = 2\pi r$ and $r = 11$. The difference is 2.5.

39. **15** Divide the total number of attendees by the number of buses. 384 divided by 26 is approximately 14.8, so the minimum number of buses required will be 15.

40. **B**

The various expenses add up to 74% of revenue, which means that the profit must equal 26% ($100 - 74$) of revenue. So to calculate total revenue, the equation should be $\$7,384 = 26\% \text{ of revenue} = (0.26) \times r$. Solving, $r = \$28,400$. Be careful, though, because the question does not ask for revenue, but instead asks for rent. So take 17% of revenue. $\$28,400 \times (0.17) = \$4,828$.

41. **B**

This is a quadratic equation, so first write it in the correct form: $x^2 - x - 12 = 0$. Factor this expression to get $(x - 4)(x + 3) = 0$ so $x = -3$ or $x = 4$. The question asks for x^2 , so the correct answer could be either 9 or 16. Since 16 is not one of the choices, the correct answer is 9, (B).

42. **B**

Since Faculty accounts for 37% of the endowment and Administration accounts for 24%, the difference between them is 13% of the endowment. Take 13% of the endowment: $(0.13) \times 1,200,000 = 156,000$.

43. **28,000**

The 2012 Other Expenses = $(0.07) \times 1,200,000 = \$84,000$. The 2013 Other Expenses will be $(0.07) \times 1,600,000 = \$112,000$. The difference is \$28,000.

44. **11** First calculate the total number of players: $33 \times 24 = 792$. When these players are divided into teams of 18 players each, that will mean that there are $\frac{792}{18} = 44$ teams. So $11 = (44 - 33)$ new teams will need to be formed.

45. **C**

The correct answer must give an x -coordinate and y -coordinate that satisfy both equations. Either test each pair of coordinates in each equation, or solve algebraically by combining the two equations (substituting for y in the second equation) to get $-28x - 4 = 2x + 11$. Combine like terms: $-30x = 15$, so $x = -\frac{1}{2}$. Plugging this x value into either equation will give you $y = 10$.

46. **D**

Write it out: Bell 1 rings every 2 hours. Beginning at 9 a.m. it will ring again at 11 a.m., 1 p.m., 3 p.m., 5 p.m., 7 p.m., and 9 p.m. Bell 2 will ring every 3 hours: 9 a.m., 12 p.m., 3 p.m., 6 p.m., and 9 p.m. Bell 3 rings every 4 hours: 9 a.m., 1 p.m., 5 p.m., and 9 p.m. So all 3 bells will ring again at 9 p.m.

SOCIAL STUDIES

1. **D**

Read *all* the choices before you make up your mind. Although it is possible that the authors of the amendments were legal scholars, this isn't stated in the passage, so (A) doesn't seem likely. Nor is there any

mention of the relationship between church and state, so you can safely eliminate (B). Choice (C) says that the writers of the amendments believed in government with ultimate authority—but that seems to go against the idea of granting citizens rights that can't be taken away by the government. Choice (D) basically restates what was in the passage: The writers didn't want to give the government too much power. The correct answer is (D).

2. **B**

At first glance, *all* of these answer choices seem to be things people wouldn't like—but only one of them doesn't violate the 14th Amendment: (B) requires all citizens to pay taxes, regardless of their beliefs. Choices (A) and (C) deny equal protection under the law. Choice (D) denies due process of the law.

3. **D**

Amelia Earhart made her historic flights in an earlier era when women were often expected to take a backseat to men. Choices (A), (B), and (C) raise issues that were not mentioned in the passage and seem irrelevant. The correct answer is (D).

4. This is a tricky question. You must read the statements carefully. Notice the graph measures only union employees, not total number of employees in the public and private sectors. **Statements (a) and (c)** are correct because they refer specifically to union members and are consistent with the data given, whereas (b) and (d) are not correct because they refer to all employees, which the graph does not measure. To determine whether or not statement (e) is correct, add together the values for each line for the year 2000 and then the values for the year 2009.

$$\text{Year 2000: } >9,000 + >7,000 = \sim 16,000$$

$$\text{Year 2009: } <7,500 + <8,000 = \sim 15,500$$

The results show that union membership did indeed decrease from 2000 to 2009, making **statement (e)** correct.

5. **D**

Always read the chart first; in this case, it shows changes in employment in a number of fields. Now, go through the answer choices. Was there an increase in agricultural jobs? Actually, no, there was a decline, so eliminate (A). Was there more growth in administrative support than in any other occupation? No, services had more growth, so eliminate (B). Was there more growth in administrative support than there was in services and technicians and support jobs combined? No, services *alone* had a bigger increase, so eliminate (C). Was there less growth in precision production than in professional specialties? Well, yes, as a matter of fact, there was! The correct answer is (D).

6. **C**

Do not let the academic language of the prompt throw you off. While it may sound intimidating, GDP is just a measure of wealth. For this question, the definition does not even matter because it asks you to select the *opinion*—that something should be done—from among the facts of what has occurred. Choices (A), (B), and (D) can be verified from the data in the graph. They do not express personal opinions. So long as the data from the graph is accurate, they cannot be disputed. Choice (C), however, expresses a political opinion, not a fact.

7. **A**

President Adams believes “the whole continent of North America” is “destined by Divine Providence” to be part of one “Union.” The belief

that God ordained the expansion of the United States from the Atlantic Ocean to the Pacific Ocean is known as “Manifest Destiny,” (A). Choice (C) is not quite right, since imperialism implies interfering in the politics of other nations. Choices (B) and (D) are irrelevant to the quote.

8. C

The chart shows the life expectancy rates for males and females in different countries. This question wants to know which group will have the shortest life span. As you look at the chart, you’ll notice that females live longer than males in all three countries—which eliminates (A) and (B). Whose life span is shorter: American males or Japanese males? The chart shows the correct answer is (C).

9. C

Japan’s life expectancy is just a bit higher than those of the other countries. Which of the answer choices accounts for that? Choices (A) and (B) don’t supply a reason why Japanese people live longer. Choice (A) discusses Asian men—which could include men from many other Asian countries and doesn’t address Japanese women. Choice (B) seems to be a reason that Americans should live longer. Choice (D) is in the right direction at least, but for the most part, natural disasters don’t come along that often, and statistically don’t change life expectancy much. Actually, there are more earthquakes in Japan than there are in the United States. The correct answer is (C) because it supplies a possible reason why people live longer in Japan: free health care.

10. D

America may be a great place, but (A) is unfortunately a little too optimistic. Choice (B) incorrectly says that immigrants do not expect

to find jobs in the United States. The passage states that they come “in search of new opportunities.” The passage makes clear that the United States fosters its reputation as a melting pot by putting up symbols of its openness such as the Statue of Liberty, so we can eliminate (C). The correct answer is (D), which restates what is said in the passage.

11. **A**

The answer to this question can be found in the last sentence of the first paragraph: “new opportunities...and an environment free from political unrest and oppression.” The correct answer is (A), which simply restates that sentence. Choice (B) is not referred to in the passage, while (C) and (D) say the opposite of what the passage does.

12. **D**

Choice (A) can be found in paragraph 3. Choices (B) and (C) can be found in the last sentence of paragraph 1. Only (D) is not directly supported by the article.

13. **D**

This advertisement shows an example of the bigotry shown to new immigrants back in the 1850s. The writer of the advertisement clearly doesn't want any new immigrants coming to the United States or holding office here. So which of the answer choices would this writer disagree with? The correct answer is (D), which proposes a law giving immigrants the right to vote—something the writer clearly would have hated. All the other answer choices are suggestions of ways to keep immigrants or their goods out of the country.

14. **C**

“Suffrage” is the right to vote. According to the map, many women had full suffrage prior to 1920, so (A) is wrong. The 19th Amendment

gave all American women the universal right to vote, but “full economic and political equality” is too strong. Eliminate (B). According to the map, most Western States had given women full suffrage before 1920, so (C) is the most supported by the data. Alaska and Hawaii (neither of which became states until 1959) are not represented by the map, so (D) is unsupported.

15. **B**

Both passages mention “liberty,” so (A) is wrong. The preamble mentions “tranquility,” while the Declaration mentions “happiness,” so eliminate (C). Choice (D) is definitely mentioned in the Declaration. “Defense” is mentioned only in the Preamble and not in the Declaration, so (B) is the best answer.

16. **D**

The graph shows that the least crisis-prone industry is oil refining, which is (D). You may have felt that in this day and age, oil refining is actually pretty crisis-prone. But on the GED® test, all we have to do is read the graph and choose based on what it says.

17. **C**

This question requires you to pay attention to the information in the graph. The most densely populated continents are, in fact, Europe and Asia, (C). Two of the world’s most populous nations, China and India, are found in Asia. They contain nearly 2.5 billion of the Earth’s 6.5 billion inhabitants between them.

18. **A**

Population density is determined most importantly by climate and geography. Deserts, extreme arctic environments, and highly

mountainous regions have few human inhabitants. Therefore, (A) is correct.

19. **B**

TAB 1 defines “manifest destiny” as the desire to “possess the whole of the continent” (i.e., Westward Expansion). TAB 2 tells us that Democrats supported Westward Expansion, while Whigs did not. Don’t worry; you don’t need to know anything about the presidents mentioned in the answers. Just stick to the facts. Since Democrats supported Westward Expansion, eliminate (A). Since Whigs opposed Westward Expansion, eliminate (C). Choice (D) is impossible, since, according to the map key, the Transcontinental Railroad was built around 1869, well after Pierce’s presidency. That leaves (B). Polk was a Democrat, and thus supported the notion of manifest destiny.

20. **A**

“Pure democracy” is a system in which the majority is not “held in restraint,” so eliminate (C). In a monarchy, (B), a king or queen makes law; we do not have mention of that. Anarchy, (D), is the complete absence of government, so the best answer is (A).

21. **A**

Choices (B), (C), and (D) all give opinions that paint a rosy picture of improvements in technology. Only (A) predicts a negative consequence: that new technology will enable companies to cut their workforce, throwing people into unemployment.

22. **B**

“All counties” makes (A) too extreme to be true. Plus, we see only states’, not counties’, unemployment rates in Tab 2. Choice (C) is untrue, since Vermont has a low unemployment rate. Choice (D) is the

opposite; lighter-shaded states have a lower rate of unemployment, thus a HIGHER rate of employment. Choice (B) is supported by TAB 1, since there are more dark portions in the Northeast than in the Southeast.

23. **D**

TAB 2 shows that *Plessy v. Ferguson* considered the notion of “enforced separation of the two races” as “a badge of inferiority” as a fallacy (a false idea). TAB 3 shows that *Brown v. Board of Education* ruled that “separate but equal has no place,” thus directly going against the *Plessy v. Ferguson* ruling. *Plessy v. Ferguson* was NOT upholding civil rights, so eliminate (B). *Brown v. Board of Education* did NOT uphold “separate but equal,” (C); it struck it down, (D). Choice (A) is wrong because it goes beyond what is directly supported by the sources. Choice (D) is the correct answer.

24. **D**

The cotton gin “caused the expansion of the cotton industry in the American South,” (D), by making the production of cotton much more efficient. None of the other answers address this impact.

25. **D**

While the passage describes the difficulties and complexities of interpreting the Constitution, it does not imply that such difficulties make the document bad. Choices (A), (B), and (C) all go well beyond the passage by saying that the Constitution is bad in one way or another. So the correct answer must be (D), which says that our interpretations of the Constitution have changed over time. This is illustrated by the example of Congress finally changing its mind about a peacetime draft.

26. **B**

This graph shows some statistics about people called to jury duty, broken down by household income. Choice (A) is contradicted by the graph because a greater percentage of higher-income people are called than lower-income people. Choice (C) is contradicted by the graph because only 15 percent of the lower-income people called actually served on juries, a lower percentage than the higher-income people called. Choice (D) is not in any way supported by the graph. Choice (B) is correct because the graph shows that, of adults from households of more than \$40,000, 225 have served, while of those with lower incomes, 15% have served.

27. **A**

According to the passage, the problem with nuclear power is where to store dangerous by-products. If there was a better way to store these by-products, there might be an increased use of nuclear power. That is exactly what (A) proposes. The other answer choices all propose options that would increase use in non-nuclear sources of energy.

28. **D**

All three forms of energy production involve turbines. Erosion is a problem only with hydroelectric power. Waste, smoke, and smog are produced only with fossil fuels and nuclear power.

29. **B**

Choices (C) and (D) would make no sense, because a community with large coal or oil reserves would presumably be less likely to use hydroelectric power. A desert community might want to use hydroelectric power, but would have little chance to use it without a source of water. Choice (B) is the best answer.

30. **A**

Studying the cartoon, we notice that the man carrying the “big stick” is walking through the area near the Caribbean Sea. The Spanish controlled these territories, so (A) is the most logical choice. Kudos to you if you recognized the face of Theodore Roosevelt and his famous quote: “Speak softly and carry a big stick.”

31. **D**

Muir was clearly a conservationist. He would have hated (A) and (B) because they are both arguments in favor of destroying the environment. Choice (C) is vague and thus not a great answer: “Human benefit” could mean almost anything. The correct answer is (D).

32. **D**

The global map shows four points. From west to east, the four points are D, B, A, and C. The correct answer is (D).

33. **C**

The only city not located near the Atlantic Ocean or the Gulf of Mexico is Chicago, (C).

34. Studying Lincoln’s quote, we notice that he proclaimed “all persons discouraging volunteer enlistments, resisting militia drafts, or guilty of any disloyal practice, affording aid and comfort to Rebels against the authority of United States, shall be subject to martial law and liable to trial and punishment by Courts Martial.” This is consistent only with statement (c). All other statements are unsupported by the information provided.

35. **B** Nixon stated, “Therefore, I shall resign the Presidency effective at noon tomorrow.” This matches (B), not (D). The passage says nothing about impeachment (A). Choice (C) is tempting, but Ford was already the vice president, so when the president steps down, it is the vice president’s job and Constitutional duty to take over as president. He does not need to be “appointed” to do so.

SCIENCE

1. **A**

According to the table, the normal total cholesterol level range is between 125 and 200 mg/dL. Choice (A) is correct because a total cholesterol level of 150 fits into this normal range.

2. **B**

The graph shows a straight line moving up and to the right. Such a line shows a constant increase in both cardiac output and blood pressure. Therefore, as cardiac output increases, blood pressure also increases. Choice (B) is thus the credited answer.

3. **C**

The passage defines a carnivore as an animal that eats other animals. Hawks are carnivores because they eat snakes, mice, and birds, and snakes are carnivores because they eat mice. Since insects eat both plants and other insects, they are omnivores, rather than carnivores, so (D) is incorrect.

4. **B**

The question states that hawks consume rabbits, so an accurate food web should have an arrow pointing from rabbits to hawks. Choices (A) and (D) reverse the direction of this arrow, making it appear as

though rabbits eat hawks, so you can eliminate both of these choices. The question also indicates that rabbits are herbivores, meaning that they eat only plants. However, (C) includes an arrow from birds to rabbits, making it appear as though rabbits eat birds. Therefore, (C) is incorrect. Choice (B) correctly includes an arrow from grass and plants to rabbits, showing that rabbits eat grasses and plants, and also includes an arrow from rabbits to hawks, showing that hawks eat rabbits. Thus, (B) is the correct answer.

5. **25** Based on the information provided, a substance is basic when its pH is above 7. Of the four substances listed, one has a pH above 7, so $\frac{1}{4}$, or 25%, of the substances are basic.

6. **D**

The theory does not discuss the differences between the number of crystals that round geodes contain and the number of crystals that geodes of other shapes contain, so (A) is incorrect. The theory states that round geodes form when lava bubbles as it cools after a volcanic eruption. Therefore, (B) actually weakens the theory and is not the credited answer. The theory does not discuss the speed with which water and minerals cool inside geodes, so (C) is incorrect. Choice (D) strengthens the theory by providing a link between geodes and the lava that accompanies a volcanic eruption, so (D) is correct.

7. **C**

To answer this question, consider what groups the scientist would need. She wants to prove that the combination of fertilizer and compost will yield the best results, so of course she needs one group that receives both fertilizer and compost. She also needs one group that receives only fertilizer, and one group that receives only compost.

Having two such groups is the only way to be sure that it is the combination, rather than either of the two individual ingredients, that would account for the results. She also needs a control group: plants that receive neither fertilizer nor compost, to measure her results against. That's four groups of plants, making (C) the credited answer.

8. **C**

The passage states that a flower with one yellow gene and one red gene will have orange flowers. In the Punnett Square, all of the offspring have one red gene and one yellow gene, so all of the offspring will have orange flowers. The correct answer is therefore (C).

9. **B**

Upward arrows show the water being delivered to clouds, and the upward arrows are labeled evaporation and transpiration, so (B) is correct. Precipitation is represented by a downward arrow and shows water leaving the clouds, so (D) is not the credited answer.

10. **A**

On the left, the 5O_2 term represents oxygen, so the C_3H_8 must represent propane. On the right, the 3CO_2 represents carbon dioxide, and the $4\text{H}_2\text{O}$ term represents water. Since the resulting substance is composed of both carbon dioxide and water, only (A) describes the reaction. Choice (B) mentions only water as a product, so (B) is incorrect. The oxygen alone is not responsible for the carbon dioxide, so (C) is incorrect. Finally, the propane alone does not become water, so (D) is not the credited answer.

11. **55** Dissolved gases, nutrients, and water are components that are not composed of cells. Add up the percentages of each of these to find the

percent of blood that is not composed of cells: $1\% + 3\% + 51\% = 55\%$. Alternatively, add up the 43% red blood cells and the 2% white blood cells, and then subtract that 45% from the total to get 55%.

12. **B**

Initially the graph shows a curve going up and to the right, which means that the rate of product formation initially increased. Later, however, the graph shows the curve leveling off, which means that the rate of product formation became constant. Therefore, (B) is the correct answer. Choice (A) is incorrect because, while the rate of product formation initially increased, it eventually leveled off. Choice (C) is incorrect because the rate of product formation never decreased. Finally, (D) is incorrect because the rate of product formation was constant only at the very end.

13. **A**

Don't get lost in the complicated diagram; instead, use Process of Elimination to get rid of bad answer choices. The diagram shows an arrow labeled *photosynthesis* that points from CO₂ in the atmosphere to plants, showing that plants absorb CO₂ from the atmosphere through photosynthesis. Another arrow labeled *food* points from plants to animals, showing that plants transfer CO₂ to animals through food. Next, an arrow labeled *waste products* points from animals to soil, showing that animals transfer CO₂ to the soil through waste products. This is the process that (A) outlines, so (A) is the correct answer. The arrow labeled *respiration* points from animals to CO₂ in the atmosphere, showing that animals release CO₂ into the atmosphere. Choice (B) reverses this relationship, suggesting that animals instead absorb CO₂ from the atmosphere. Therefore, (B) is incorrect. The arrow labeled *respiration* points from plants to CO₂ in the atmosphere, showing that plants release CO₂ into the atmosphere

through respiration. Since (C) reverses this relationship by suggesting that plants absorb CO_2 through respiration, you can eliminate (C). The arrow labeled *root respiration* points from plants to the soil, showing that plants release CO_2 into the soil through root respiration. Choice (D) reverses this relationship by suggesting that plants absorb CO_2 through root respiration, so (D) is not the credited answer.

14. **B**

Based on the information in the graph, this species of amoebas is more likely to thrive if cultured alone than if cultured in a mixed culture, since a population of amoebas cultured alone reaches much higher population numbers than the population of the amoebas grown in a mixed culture. Therefore, you can eliminate (A). Choice (B) accurately describes the situation shown in the graph, and is the correct answer. Since the population of amoebas grown alone seems to remain approximately constant after the population reaches close to 500, there is no evidence to support (C). The population of amoebas cultured in a mixed culture does dip slightly once it reaches approximately 175, but the graph does not tend toward the y -axis afterward, so there is no evidence to support (D).

15. **D**

Since r , which represents the distance between the two objects, is in the denominator of the fraction, making r larger will make the fraction as a whole smaller. Therefore, you can eliminate both (A) and (B). Decreasing the value of M will make the fraction as a whole smaller, so (C) is incorrect. Increasing the value of M will make the fraction as a whole larger, since M is in the numerator, and decreasing the value of r (“halving” means “cutting in half”) will make the fraction as a whole larger, since r is in the denominator. Thus, (D) is the credited answer.

16. 9.5

To find the median of a list of numbers, write out the list of numbers in ascending order and then look for the number in the middle of the list. In this case, the list is 2, 2, 4, 6, 8, 11, 13, 14, 15, 25. There are an even number of numbers, so the numbers 8 and 11 both fall in the middle of the list. Take the average of the two numbers to find the median: $8 + 11 = 19$, and $\frac{19}{2} = 9.5$. Therefore, the median is 9.5.

17. A

Between March and April, the average rainfall increased from 50 mm to 100 mm, making the total increase between the two months equal to 50 mm. The average rainfall per month actually decreased between April and May and between May and June, so eliminate (B) and (C). The average rainfall per month remained the same between June and July, so you can eliminate (D).

18. A

The mode of a list of numbers is the number that appears most frequently. Since both June and July experienced 40 mm of rainfall, and no two other months experienced the same amount of rainfall as each other, the mode of the average monthly rainfall shown in the charts is 40, and the correct answer is (A).

19. **Oxygen (c), nitrogen (b), carbon (a).** According to the information presented, the atomic number of an element is the number of protons in one atom of that element, and the atomic mass is equal to the sum of the number of protons and the number of neutrons. The sum of the number of protons and the number of neutrons in oxygen is 16, so the

atomic mass of oxygen is 16. Nitrogen has 7 protons, so the atomic number of nitrogen is 7. Finally, the sum of the number of protons and the number of neutrons in carbon is 12, so carbon has an atomic mass of 12.

20. **B**

The passage indicates that the atomic number of an element is determined by the number of protons, not the number of electrons, in an element, so decreasing the number of electrons in an element would not change that element's atomic number. Eliminate (A). If fluorine has an atomic number of 9, then based on the information in the passage, it must have 9 protons. Since oxygen has 8 protons, then fluorine must have more protons than does oxygen, and (B) is the credited answer. If boron has an atomic mass of 10, then the sum of the number of protons and the number of electrons in boron is 10. If boron has an atomic number of 5, then it has 5 protons. Therefore, if boron has an atomic mass of 10, then it must have 5 neutrons. Carbon has 6 neutrons, so the statement in (C) is false. Finally, the passage indicates that the atomic mass of an element is determined by the sum of the number of protons and the number of neutrons in an element, not by the number of electrons. Therefore, changing the number of electrons in oxygen would not change the atomic mass of oxygen. Eliminate (D).

21. **D**

According to the information in the chart, a strong earthquake can cause damage in areas up to 100 miles distant from the epicenter of the quake. Since the house was located more than 100 miles from the epicenter, the earthquake in question must have been more powerful than a strong earthquake. Therefore, you can eliminate (A), (B), and (C). The correct answer is (D).

22. A

According to the information in the passage, an earthquake that measures 3.0 on the Richter scale has a shaking amplitude that is 10 times that of an earthquake that measures 2.0 on the Richter scale. Therefore, for every 1-point increase on the Richter scale, the shaking amplitude increases by a factor of 10. Thus, an earthquake that measures 5.0 on the Richter scale must have a shaking amplitude that is 10 times that of an earthquake with a shaking amplitude of 4.0, and an earthquake that measures 6.0 on the Richter scale must have a shaking amplitude that is 10 times that of the 5.0 earthquake. Since you must twice multiply the shaking amplitude of the 4.0 earthquake by 10 to find the shaking amplitude of the 6.0 earthquake, the ratio of the shaking amplitude of the 4.0 earthquake to the shaking amplitude of the 6.0 earthquake will be $1:10 \times 10$, or 1:100. The correct answer is therefore (A).

23. C

According to the information given, autotrophs do not gain their nutrition from other creatures. Since elephant seals consume squids, elephant seals are not autotrophs, so you can eliminate (A). Primary consumers eat only autotrophs, so elephant seals are also not primary consumers. The passage indicates that secondary consumers eat primary consumers, which in turn eat autotrophs. Since protists and algae are autotrophs, and squid eat both protists and algae, squid are primary consumers. Since elephant seals eat squid, elephant seals are therefore secondary consumers, and the correct answer is (C). Apex predators have no predators of their own. However, since killer whales eat elephant seals, elephant seals are not apex predators, and (D) is incorrect.

24. C

According to the food web, cod eat only algae, and algae are autotrophs, and therefore do not feed on krill. Thus, the cod population would be unlikely to be affected were the population of krill depleted. Eliminate (A). Squid do not eat krill, and feed only on protists and algae, both of which are autotrophs and therefore do not eat krill. Thus, the squid population would be unlikely to be affected were the population of krill depleted, so (B) is incorrect. Leopard seals feed on cod and on penguins. Cod feed only on algae, but penguins feed on both algae and krill. Therefore, were the krill population depleted, the penguin population would likely also be affected, which in turn would mean that the leopard seal population would likely be affected. The correct answer is, therefore, (C). Elephant seals feed on squid, which feed on algae and protists, neither of which consume krill. Since the elephant seal food chain would not be disrupted were the population of krill depleted, elephant seals would be unlikely to be affected were the krill population depleted. Choice (D) is thus not the credited answer.

25. **1. Heat detected (c). 2. Spinal interneurons signaled (d). 3. Motor neurons excited (a). 4. Muscle cells signaled (e). 5. Muscle cells contract (b).** According to the passage, the first thing that happens when a person touches a dangerously hot object is that *sensory receptors detect dangerous heat levels*. Thus, the first box should contain *Heat detected*. Next, the passage indicates that sensory receptors *send signals...to spinal interneurons in the spinal cord*. Thus, the second box should contain *Spinal interneurons signaled*. The passage then says that *spinal interneurons excite the motor neurons that control the arm muscles*. Therefore, the fourth box should contain *Motor neurons excited*. Then the passage continues *which in turn send signals to the muscle cells*. So the fourth box should contain *Muscle cells signaled*. Finally, the passage concludes with *the muscle cells then contract, causing the arm to move away*, so the fifth box should contain *Muscle cells contract*.

26. B

The researchers want to know whether the chemical compound itself causes hives, so they need test subjects who, if they develop hives, do so because of the chemical, not for any other reason. So, you can eliminate (A). You can also eliminate (C) and (D), because the experimental and control groups of this or any experiment should be as similar as possible, in order to create a valid comparison. Therefore, (B) is the credited answer.

27. C

Don't get lost in the terminology. Remember, you are given a formula, so all you need to do is use it. According to the information in the passage, $\text{Force} = \text{mass} \times \text{acceleration}$. Therefore, if an aircraft has a mass of 1,800 kilograms, and has engines that provide a thrust force of 90,000 Newtons, then the $90,000 \text{ Newtons} = 1,800 \text{ kilograms} \times \text{acceleration}$. Divide both sides by 1,800 to find that $90,000 \text{ Newtons} \div 1,800 \text{ kilograms} = 50 \text{ meters/second}^2$. The passage indicates that the second aircraft experiences the same acceleration, so you know that $\text{Force} = 1,500 \text{ kilograms} \times 50 \text{ meters/second}^2 = 75,000 \text{ Newtons}$. Therefore, the correct answer is (C).

28. A

According to the passage, scientists use index fossils to determine the time periods at which other species may have existed. Therefore, the correct answer must include information about when a species existed. Choice (A) correctly describes this situation, since according to this choice, scientists are able to fix the era of *Mesolenellus hyperborea* because they find index fossils nearby. The passage does not indicate that two species that existed at the same time must have come from a similar habitat, so (B) is incorrect. Choice (C) does not include any mention of an index fossil, so (C) is also not the credited answer.

Finally, (D) includes a discussion of habitat, rather than of time, so (D) is also incorrect.

29. **D**

As pressure increases, the curve of the graph decreases quickly at first and then levels off slightly. If pressure and volume were directly proportional, then volume would increase as pressure increased. Since the graph shows the opposite to be true, you can eliminate (A). Choice (B) also suggests that volume increases as pressure increases, so (B) is also incorrect. As pressure rises from 1 atmosphere to 2 atmospheres, volume decreases from 8 liters to 3 liters, rather than 8 liters to 2 liters, so (C) is not the credited answer. When pressure is at 4 atmospheres, volume is at approximately 1 liter and is still decreasing. Therefore, if the trend shown in the graph continues, then when pressure reaches 5 atmospheres, volume should be near $\frac{1}{2}$ liter. Thus, (D) is the correct answer.

30. **Less, weight.** According to the information in the passage, mass is the amount of matter that an object contains, and weight is the mass of an object multiplied by the acceleration that the object feels due to gravity. Since the passage indicates that the acceleration that an object feels due to gravity is different on the Moon than on the Earth, but does not indicate that an object on the Moon is actually composed of less matter than it would be on the Earth, it is a person's weight, not their mass, that changes. Additionally, the passage states that the acceleration due to gravity is less on the Moon than it is on the Earth,

so a person's weight would be less on the Moon than on the Earth. Thus, the correct answer choices are *less* and *weight*.

31. **B**

According to the information in the passage, creatures have analogous structures when they possess features that may appear different, but perform the same function. Since echolocation and sight are not the same function—they result from different senses—(A) is incorrect. Choice (B) gives an example of features that perform the same function—both types of wings provide flight capabilities—but that appear different, since bat wings are composed of membrane, while bird wings are not. Therefore, the correct answer is (B). Choices (C) and (D) do not discuss physical features of either birds or bats, so these can be ruled incorrect.

32. **C**

The information given indicates that polyuria is excessive urine production, so those who suffer from the condition need to lower their urine production. Since the chart indicates that drinking caffeinated diet sodas raises, rather than lowers urine production, (A) is incorrect. The chart also indicates that during the two-week period in which the subjects drank slightly salty water, their urine production was lower, so nothing in the chart indicates that drinking salty water increases the risk of polyuria, so (B) is incorrect. The chart shows that drinking caffeinated diet sodas increases urine production, so those suffering from polyuria would want to avoid consuming too many caffeinated diet sodas. Therefore, the correct answer is (C). Finally, nothing in the chart or in the passage suggests that those suffering from polyuria should vary the liquids that they consume, so you can eliminate (D).

33. **A**

If the volunteers had eaten only watermelon one week, but had eaten only processed foods high in salt the second week, then the differences in urine production may have been due to changes in food diet, rather than changes in liquid diet. Therefore, the volunteers needed to follow the same diet throughout the study, and (A) is correct. The information in the passage indicates that all volunteers consumed the same type of liquid for each two-week period, regardless of what they craved, so (B) is incorrect. The passage does not indicate whether the diet that the volunteers followed was nutritious, so (C) is incorrect. The information in the passage also states that the chart displays the average daily urine output for each volunteer. This suggests that the volunteers did not all produce the same amount of urine per day, so (D) is not the credited answer.

34. **D**

According to the passage, cabbage juice turns blue when combined with a basic substance. The passage also indicates that basic substances have a pH above 7. Of the liquids in the chart, only ammonia has a pH above 7, so the correct answer is (D).

35. **C**

According to the passage, igneous rocks either form below ground from magma or above ground from volcano lava. Metamorphic, rather than igneous, rock forms when rock undergoes profound chemical changes, so (A) is incorrect. Igneous rocks can form underground, but the passage does not discuss whether they can form under water. Instead, the passage mentions that sedimentary rock can form under water. Therefore, (B) is incorrect. Choice (C) indicates that the rock was found near a volcano, and since the passage indicates that igneous rocks can form from volcano lava, (C) supports the student's hypothesis, and is the correct answer. The passage indicates that

sedimentary rock, rather than igneous rock forms from minerals, so (D) is also incorrect.