

PRACTICE EXAM 9: NYSTCE MULTI-SUBJECT TEACHERS OF CHILDHOOD (120 QUESTIONS)

This practice exam contains 120 selected-response questions: 40 Literacy and English Language Arts, 40 Mathematics, and 40 Arts and Sciences. The actual NYSTCE also includes one constructed-response item in Part One and one in Part Two. Official testing times are 2 hours for Part One, 2 hours 15 minutes for Part Two, and 1 hour for Part Three. The passing score is 520 for each part. Choose the best answer for each question.

1. A student changes the first sound in map from /m/ to /t/ and says tap. Which phonological-awareness skill is demonstrated?

- A. Phoneme substitution
- B. Syllable deletion
- C. Rhyme recognition
- D. Print directionality

2. Which word contains a consonant digraph rather than a consonant blend?

- A. stop
- B. crab
- C. flag
- D. ship

3. In the word washable, what does the suffix -able contribute to the word's meaning?

- A. It means washed in the past.
- B. It means capable of being washed.
- C. It means a person who washes.
- D. It means before washing begins.

4. A sentence reads, 'Unlike the arid desert, the marsh was saturated, with water covering nearly every patch of soil.' Which context clue most directly supports the meaning of saturated?

- A. the mention of a desert
- B. the word unlike by itself
- C. the explanation that water covered nearly every patch of soil
- D. the fact that soil is named

5. A writer wants to join two complete thoughts without using a coordinating conjunction. Which revision uses a semicolon correctly?

- A. The greenhouse was warm, the seedlings grew quickly.
- B. The greenhouse was warm; the seedlings grew quickly.
- C. Because the greenhouse was warm; the seedlings grew quickly.
- D. The greenhouse; was warm and the seedlings grew quickly.

6. Which sentence correctly matches the verb with the true subject of the sentence?

- A. The collection of shells are displayed near the window.
- B. The rows of chairs is ready for the audience.
- C. Each of the lanterns glows brightly after sunset.
- D. The basket of towels were left beside the pool.

7. In the sentence 'Her memory was a lantern in the confusing maze,' which figure of speech is used?

- A. Simile
- B. Alliteration
- C. Onomatopoeia
- D. Metaphor

8. A paragraph explains that community seed libraries let gardeners share locally adapted seeds, preserve plant varieties, and reduce the cost of starting a garden. Which statement best expresses the central idea?

- A. Seed libraries provide several practical and ecological benefits to local gardeners.
- B. Seed libraries are used only by professional farmers.
- C. Every seed variety grows equally well in every climate.
- D. Gardening is inexpensive only when stores stop selling seeds.

9. A student wants to confirm the pronunciation and part of speech of the word meticulous. Which reference source is most appropriate?

- A. A table of contents
- B. A historical atlas
- C. A dictionary entry for meticulous
- D. A thesaurus entry for careful

10. A brochure lists trail rules, explains why visitors should stay on marked paths, and gives directions to scenic overlooks. What is the brochure's primary purpose?

- A. To entertain with a fictional adventure
- B. To persuade readers to buy hiking equipment
- C. To describe the author's childhood memories
- D. To inform and guide visitors

11. A travel guide says, 'Turn left at the fountain, then you will see the museum entrance ahead.' Which narrative point of view is used in these directions?

- A. Second-person point of view
- B. First-person point of view
- C. Third-person limited point of view
- D. Third-person omniscient point of view

12. An informational paragraph explains that a prolonged freeze damaged citrus blossoms; therefore, fewer oranges developed later that season. Which organizational relationship is emphasized?

- A. Spatial description
- B. Cause and effect
- C. Question and answer
- D. Compare and contrast

13. A character rereads a text message three times, puts on a coat before anyone asks, and waits beside the front door. Which inference is best supported?

- A. The character has forgotten how to read.
- B. The character expects to leave soon.
- C. The character dislikes wearing coats.
- D. The character is planning to go to sleep.

14. Which word has the most positive connotation in a description of a person who refuses to give up on a difficult task?

- A. stubborn
- B. obstinate
- C. persistent
- D. unyielding

15. A student argues that the school should add more bicycle racks. Which evidence would most strongly support the claim?

- A. A student's favorite bicycle color
- B. A poem about riding through a park
- C. A list of bicycle brands sold online
- D. A count showing that existing racks are full on most school days

16. In a poem, the repeated line 'Still the river carries on' appears at the end of every stanza. What is the most likely effect of this repetition?

- A. It emphasizes persistence as a central idea.
- B. It changes the poem into a dictionary entry.
- C. It proves every stanza has the same number of syllables.
- D. It eliminates all imagery from the poem.

17. In a science article, the phrase 'thermal insulation' appears in a section about animals surviving cold weather. Which strategy would best help a reader determine the phrase's meaning?

- A. Ignore the phrase because technical words are optional.
- B. Assume thermal means related to sound because both are scientific.
- C. Use nearby explanations and the word parts to infer that it refers to reducing heat loss.
- D. Replace the phrase with any familiar two-word expression.

18. A first-grade teacher says /m/ /a/ /p/ slowly and asks students to say the whole word. Which skill is being practiced?

- A. Phoneme blending
- B. Phoneme deletion
- C. Syllable counting
- D. Letter naming

19. A student knows the letter names but does not consistently connect letters with the sounds they represent. Which instruction should come next?

- A. Silent sustained reading only
- B. Explicit practice linking graphemes to their common phonemes
- C. Memorizing page numbers in a book
- D. Copying long sentences without reading them

20. Students have learned short-vowel patterns and common consonant digraphs. Which text is best for initial decoding practice?

- A. A passage dominated by untaught vowel teams
- B. A page of random letter strings
- C. A complex article chosen only for topic interest
- D. A decodable passage containing many words that use those taught patterns

21. A beginning reader can decode regular words but repeatedly misreads the high-frequency word said. What is the most appropriate instructional response?

- A. Tell the student every high-frequency word must be guessed from context.
- B. Stop phonics instruction until the word is memorized visually.
- C. Teach the regular and irregular parts of said explicitly and practice it in connected text.
- D. Ask the student to skip the word whenever it appears.

22. A student accurately reads sunset as sun-set after the teacher marks the boundary between the two meaningful parts. Which decoding strategy is the student using?

- A. Analyzing a compound word into smaller recognizable words
- B. Applying a final-e syllable rule
- C. Using alphabetical order
- D. Identifying a prefix and a bound Latin root

23. Which activity best develops students' awareness of meaningful word parts?

- A. Count the letters in each word and compare the totals.
- B. Copy the words in alphabetical order and read them aloud.
- C. Underline punctuation near each word and name the marks.
- D. Sort replay, reread, and rebuild by shared prefix re- and discuss its meaning.

24. A third-grade student reads accurately but in a slow, word-by-word manner that obscures sentence meaning. Which intervention is most appropriate?

- A. Practice isolated letter names with increasingly rapid flash-card drills.
- B. Use repeated oral reading with teacher modeling, feedback, and attention to phrasing.
- C. Copy the passage several times while reading each sentence silently.
- D. Read faster by moving through punctuation without pausing for phrasing.

25. After reading a folktale, which question most directly assesses inferential comprehension?

- A. Why does the youngest sibling return the purse when no one is watching?
- B. What is the youngest sibling called in the opening paragraph?
- C. On which page does the lost purse first appear?
- D. How many paragraphs are included in the complete folktale?

26. A teacher wants to strengthen academic oral language before a social studies lesson. Which activity is most effective?

- A. Require students to work silently for the entire lesson.
- B. Ask students to memorize vocabulary spellings without speaking.
- C. Have partners use sentence frames to explain cause-and-effect relationships with target vocabulary.
- D. Limit responses to yes-or-no answers.

27. A student's spelling sample includes bote for boat, sed for said, and fone for phone. Which teacher action would provide the most useful diagnostic information?

- A. Count only the total number of misspelled words.
- B. Assign a handwriting grade for the sample.
- C. Ask the student to rewrite every word ten times before analysis.
- D. Analyze which sound-spelling patterns are represented correctly and which orthographic patterns are missing.

28. A student encounters the sentence 'The crane lifted the beam above the construction site.' The student knows crane as a bird. Which strategy best develops knowledge of multiple-meaning words?

- A. Assume a word can have only one meaning.
- B. Compare the two meanings and use sentence context to determine which meaning fits.
- C. Replace crane with bird in every sentence.
- D. Ignore the surrounding sentence and choose the first meaning remembered.

29. Which activity best teaches students to use morphology when reading unfamiliar academic words?

- A. Count the vowels in disagreement and compare the total with other words.
- B. Read disagreement backward one letter at a time and repeat it.
- C. Divide disagreement into dis-, agree, and -ment and discuss each morpheme's meaning.
- D. Find a word that rhymes with disagreement and copy both words.

30. A multilingual learner understands the concept of erosion in a home language but is new to the English term. Which support best builds on existing knowledge?

- A. Treat erosion as an entirely new concept and avoid discussing prior knowledge.
- B. Practice pronunciation repeatedly before connecting the word with its meaning.
- C. Memorize an English dictionary definition without using examples or demonstrations.
- D. Use photos and a demonstration to connect the known concept with the English word erosion.

31. A second-grade student can identify story characters and setting but has difficulty explaining how a problem is resolved. Which organizer would be most useful?

- A. An alphabetized list of important words from the story
- B. A story map showing the problem, attempts, and resolution
- C. A tally chart showing punctuation marks used in the story
- D. A calendar listing dates when several stories were published

32. During a teacher think-aloud, which statement best models summarizing rather than predicting?

- A. The section mainly explains how beavers change stream habitats by building dams.
- B. I think the next section will describe another animal.
- C. I wonder why the author chose this photograph.
- D. This word reminds me of a trip I once took.

33. Students are reading an article with headings, a labeled diagram, and a glossary. Which instructional prompt best develops strategic use of text features?

- A. Tell students to ignore features until after reading every paragraph.
- B. Ask how each feature helps locate, preview, or clarify information in the article.
- C. Ask students to count the bold letters only.
- D. Have students copy the glossary without linking it to the article.

34. A teacher administers a brief oral-reading fluency probe every two weeks to a student receiving intervention. What is the primary purpose of this repeated measure?

- A. To assign a permanent label based on a single repeated score
- B. To replace classroom observation and all other assessment information
- C. To monitor growth and decide whether the intervention is working sufficiently
- D. To determine which genres the student most enjoys reading independently

35. Students will write an opinion essay about a school policy. Which activity belongs most clearly in the prewriting stage?

- A. Correct capitalization in the final copy.
- B. Publish the finished essay on the class website.
- C. Replace repetitive verbs after the first complete draft.
- D. List possible claims and group supporting reasons and evidence before drafting.

36. A student revises an informational article by moving a paragraph so that the explanation of a process appears immediately after the paragraph that introduces it. What is the student primarily improving?

- A. Organization and coherence
- B. Handwriting fluency
- C. Spelling automaticity
- D. Source-page numbering

37. Students are researching changes in their town's population over the last decade. Which source is most appropriate for authoritative numerical data?

- A. An official government census or municipal data portal
- B. An unsigned neighborhood rumor page
- C. A fictional novel set in the town
- D. A product advertisement from a local store

38. During a seminar, one student states an interpretation of a novel that another student questions. Which response best demonstrates productive academic discussion?

- A. You're wrong, and I don't need to explain why.
- B. Let's stop discussing the book and vote.
- C. I will repeat my first sentence louder.
- D. I see it differently because the narrator's description in chapter three suggests another motive.

39. A video report uses dramatic music and shows only interviews from people who support one side of a local issue. Which media-literacy concept is most relevant?

- A. Every video is automatically a neutral primary source.
- B. Background music proves the speakers are accurate.
- C. Selection and presentation can shape audience perception.
- D. A report is unbiased whenever it contains interviews.

40. In a play script, what is the primary function of stage directions such as '[She moves toward the window and whispers]'?

- A. They identify the dictionary definition of every word.
- B. They guide performance by indicating actions or delivery not spoken as dialogue.
- C. They provide a bibliography for the play.
- D. They convert all dialogue into narration.

41. A library received 3,875 books in one shipment and 2,469 in another. How many books did it receive altogether?

- A. 6,244
- B. 6,354
- C. 5,344
- D. 6,344

42. A baker has $7\frac{1}{2}$ kilograms of flour and uses $1\frac{1}{4}$ kilograms for each large batch. How many complete batches can be made?

- A. 5
- B. 7
- C. 6
- D. 8

43. A water tank is $\frac{11}{20}$ full. Which decimal represents the same portion of the tank?

- A. 0.55
- B. 0.45
- C. 0.60
- D. 0.75

44. A paint mixture uses 2 cups of blue paint for every 5 cups of white paint. If 18 cups of blue paint are used, how many cups of white paint are needed?

- A. 36 cups
- B. 45 cups
- C. 40 cups
- D. 50 cups

45. A saline model uses 9 grams of salt for every 120 milliliters of water. At the same concentration, how many grams of salt are needed for 200 milliliters of water?

- A. 12 grams
- B. 13.5 grams
- C. 18 grams
- D. 15 grams

46. A backpack originally costs \$72 and is marked 25% off. What is the sale price before tax?

- A. \$18
- B. \$47
- C. \$54
- D. \$57

47. A map scale states that 1.5 centimeters represents 12 kilometers. At the same scale, what distance is represented by 4 centimeters?

- A. 24 kilometers
- B. 32 kilometers
- C. 30 kilometers
- D. 36 kilometers

48. Three identical museum tickets plus an \$8 audio-guide fee cost \$44 altogether. What is the price of one ticket?

- A. \$12
- B. \$9
- C. \$14
- D. \$17

49. Which simplified expression has the same value as $6(2m + 1) - 4m$?

- A. $8m + 6$
- B. $12m + 2$
- C. $8m + 1$
- D. $16m + 6$

50. A theater installs 14 aisle lights in the first section, 20 in the second, and 26 in the third, continuing the same pattern. How many lights are in the ninth section?

- A. 56
- B. 62
- C. 68
- D. 74

51. A theater sold 240 tickets. Student tickets were 35% of the total. How many student tickets were sold?

- A. 72
- B. 80
- C. 84
- D. 96

52. A rectangular garden has a length that is 3 meters more than twice its width. If the width is 5 meters, what is the length?

- A. 10 meters
- B. 12 meters
- C. 16 meters
- D. 13 meters

53. A savings account contains \$480 and increases by \$35 each month with no withdrawals. How much will it contain after 8 months?

- A. \$720
- B. \$760
- C. \$755
- D. \$800

54. A craft club has 18 meters of ribbon and cuts pieces that are each 2.4 meters long. How many complete pieces can be cut?

- A. 7 complete pieces
- B. 6 complete pieces
- C. 8 complete pieces
- D. 9 complete pieces

55. A recipe requires 2.4 liters of broth for 6 servings. At the same rate, how much broth is needed for 15 servings?

- A. 4.8 liters
- B. 5.4 liters
- C. 6 liters
- D. 6.4 liters

56. What is the solution to the inequality $3x + 4 < 19$?

- A. $x > 5$
- B. $x < 23/3$
- C. $x > 23/3$
- D. $x < 5$

57. A taxi fare is modeled by $F = 4.50 + 2.25m$, where m is the number of miles traveled. What is the fare for 6 miles?

- A. \$18.00
- B. \$13.50
- C. \$15.75
- D. \$20.25

58. A store increases a \$50 item by 20% and later reduces the new price by 20%. What is the final price?

- A. \$40
- B. \$48
- C. \$50
- D. \$52

59. A rectangular picture frame measures 15 centimeters by 9 centimeters. Its rectangular opening measures 12 centimeters by 6 centimeters. What is the area of the visible frame border?

- A. 54 square centimeters
- B. 60 square centimeters
- C. 63 square centimeters
- D. 72 square centimeters

60. A storage bin is a prism with a base area of 36 square centimeters and a height of 7 centimeters. What is its volume?

- A. 43 cubic centimeters
- B. 126 cubic centimeters
- C. 216 cubic centimeters
- D. 252 cubic centimeters

61. A stage backdrop is a 12-meter by 8-meter rectangle with a 3-meter by 2-meter doorway cut out. What area of material remains?

- A. 84 square meters
- B. 90 square meters
- C. 94 square meters
- D. 96 square meters

62. A circle has radius 6 centimeters. Using $\pi \approx 3.14$, what is its circumference to the nearest hundredth?

- A. 37.68 centimeters
- B. 18.84 centimeters
- C. 75.36 centimeters
- D. 113.04 centimeters

63. A square has an area of 144 square inches. What is its perimeter?

- A. 24 inches
- B. 36 inches
- C. 144 inches
- D. 48 inches

64. A 10-foot ladder reaches 8 feet up a wall with its base on level ground. How far is the base from the wall?

- A. 2 feet
- B. 4 feet
- C. 6 feet
- D. 18 feet

65. A temperature rises from -7°C in the morning to 5°C in the afternoon. By how many degrees did it rise?

- A. 12°C
- B. 2°C
- C. 7°C
- D. 14°C

66. The lengths of five plant leaves are 6, 8, 8, 10, and 13 centimeters. What is the mean length?

- A. 8 centimeters
- B. 9.5 centimeters
- C. 10 centimeters
- D. 9 centimeters

67. The data set 4, 5, 5, 6, 20 contains an outlier. Which measure of center is least affected by the outlier?

- A. Mean
- B. Median
- C. Range
- D. Maximum

68. A bag contains 5 red, 3 green, and 2 yellow counters. One counter is selected at random. What is the probability of selecting a green counter?

- A. $\frac{1}{5}$
- B. $\frac{1}{3}$
- C. $\frac{3}{10}$
- D. $\frac{1}{2}$

69. A spinner has four equal sections labeled 1, 2, 3, and 4. It is spun twice. What is the probability of getting a 4 on both spins?

- A. $\frac{1}{4}$
- B. $\frac{1}{8}$
- C. $\frac{1}{16}$
- D. $\frac{1}{2}$

70. A survey of 80 students finds that 28 prefer soccer. What percent of the surveyed students prefer soccer?

- A. 28%
- B. 40%
- C. 45%
- D. 35%

71. A table shows x-values 1, 5, 9 and corresponding y-values 10, 4, -2. What is the constant rate of change of y with respect to x?

- A. -2
- B. $-\frac{3}{2}$
- C. $\frac{3}{2}$
- D. 6

72. A point at (5, -2) is rotated 180° about the origin. Where is the image located?

- A. (-5, 2)
- B. (5, 2)
- C. (-2, 5)
- D. (2, -5)

73. A rectangular floor plan uses a scale of 1 inch = 6 feet. A room measures 2.5 inches by 3 inches on the plan. What is the actual area of the room?

- A. 45 square feet
- B. 270 square feet
- C. 108 square feet
- D. 216 square feet

74. The angles of a triangle measure 48° , 67° , and x° . What is x?

- A. 55°
- B. 75°
- C. 115°
- D. 65°

75. A box plot has a first quartile of 12 and a third quartile of 21. What is the interquartile range?

- A. 9
- B. 12
- C. 21
- D. 33

76. A student says $402 - 178 = 376$ because the student subtracts the smaller digit from the larger digit in each column. Which teacher response best addresses the misconception?

- A. Assign additional subtraction problems using the same written algorithm without discussion.
- B. Give the correct answer and require the student to memorize each regrouping step.
- C. Model regrouping with base-ten blocks or an open number line, then connect it to the algorithm.
- D. Move to multiplication practice and return to subtraction after several weeks.

77. A student says the area of a 5-unit by 3-unit rectangle is 8 square units because $5 + 3 = 8$. Which representation would best address the misconception?

- A. A number line showing the locations of 3 and 5
- B. A 5-by-3 array of unit squares covering the rectangle
- C. A list of addition facts whose sums are less than 10
- D. A protractor used to measure each corner of the rectangle

78. A teacher wants to assess whether students understand why the distributive property works. Which task provides the strongest evidence?

- A. Recite the name of the distributive property and copy its symbolic form.
- B. Complete a timed multiplication-fact test and report the total correct.
- C. Model 7×13 as $7 \times (10 + 3)$ with an area diagram and explain both partial products.
- D. Copy several distributive-property examples without explaining how the products are related.

79. Students produce several different strategies for finding 25% of 64. What is the most productive teacher response?

- A. Have students compare the strategies and explain why each valid method gives the same result.
- B. Require everyone to erase all methods except the teacher's preferred one.
- C. Grade only the speed of the first answer.
- D. Avoid discussing relationships among the methods.

80. A student solves $4(x + 2) = 20$ by writing $x + 2 = 5$ and then $x = 3$. Which teacher question best probes the student's reasoning?

- A. Can you rewrite the solution using especially neat mathematical handwriting?
- B. Which pencil color did you choose while solving the equation?
- C. Can you skip the intermediate steps and report only the final value?
- D. Why does dividing both sides by 4 preserve equality in this equation?

81. A metal spoon and a wooden spoon are left in the same bowl of hot soup. After one minute, the metal handle feels warmer. Which explanation is best?

- A. Wood creates cold energy that cancels the soup's heat.
- B. The metal spoon has stopped exchanging energy with the soup.
- C. Metal conducts thermal energy along the spoon more effectively than wood.
- D. The wooden spoon must have started at a lower room temperature.

82. Which change is chemical rather than physical?

- A. Ice melts into liquid water.
- B. A sheet of paper is cut into strips.
- C. Sugar dissolves in warm water.
- D. Iron forms reddish-brown rust after prolonged exposure to oxygen and moisture.

83. A sealed syringe contains air. When the plunger is pushed inward, the air occupies less volume. Which property of gases does this demonstrate?

- A. Gas particles can be compressed closer together.
- B. Gas particles have no mass.
- C. Gas particles are permanently fixed in place.
- D. Gases cannot exert pressure.

84. As moist air rises and cools, tiny liquid droplets begin forming a cloud. Which phase-change process produced the droplets?

- A. Evaporation
- B. Condensation
- C. Sublimation
- D. Melting

85. A rock contains visible layers of compacted sand-sized particles. Which rock type is most likely?

- A. Intrusive igneous rock
- B. Metamorphic rock formed only by melting
- C. Sedimentary rock
- D. Molten magma

86. Why does the Moon appear to change shape over the course of a month?

- A. We see different portions of the Moon's sunlit half as the Moon orbits Earth.
- B. Earth's shadow covers the Moon every night.
- C. The Moon produces different amounts of light each week.
- D. Clouds permanently hide different sections of the Moon.

87. A plant is placed in darkness for several days while another identical plant receives light, with water and temperature kept the same. Which variable is being tested?

- A. Plant species
- B. Light availability
- C. Water amount
- D. Air temperature

88. Which structure in a flowering plant primarily absorbs water and mineral nutrients from soil?

- A. Petals
- B. Anthers
- C. Fruit
- D. Roots

89. In a food web, grass is eaten by rabbits, and rabbits are eaten by foxes. Which organism is the producer?

- A. Rabbit
- B. Grass
- C. Fox
- D. All three equally

90. Which body system transports oxygen, nutrients, hormones, and wastes through vessels to and from tissues?

- A. Skeletal system
- B. Integumentary system
- C. Reproductive system
- D. Circulatory system

91. A person pushes a heavy box, but the box does not move. Which statement best describes the forces on the box?

- A. No force is acting because there is no motion.
- B. Gravity stops existing while the box is still.
- C. The applied push is balanced by other forces, so the net force is zero.
- D. A force can act only after an object begins moving.

92. A simple electric circuit contains one battery, wires, and a bulb. The bulb goes out when one wire is disconnected. Why?

- A. The circuit is open, so electric current no longer has a complete path.
- B. The battery instantly loses all stored chemical energy.
- C. The bulb becomes an electrical insulator permanently.
- D. Current can travel only through air after a wire is removed.

93. Which observation provides the best evidence that sound is produced by vibration?

- A. A changing shadow is measured at several times during one sunny day.
- B. An iron nail moves toward a magnet placed a short distance away.
- C. A stretched rubber band visibly vibrates while producing an audible tone.
- D. Liquid water becomes solid after remaining in a freezer for hours.

94. A coastal location usually has smaller daily temperature changes than an inland location at the same latitude. Which property of water helps explain this pattern?

- A. Water changes temperature more slowly than many land surfaces.
- B. Water has no thermal energy.
- C. Seawater prevents sunlight from reaching land.
- D. Oceans stop Earth's rotation near coastlines.

95. Which design change would make a paper bridge more rigid without adding a different material?

- A. Soak the paper in water before testing.
- B. Fold the paper into repeated ridges or a channel shape.
- C. Cut the paper into many disconnected pieces.
- D. Remove all bends and make the sheet thinner.

96. Students design filters using gravel, sand, and cloth to clarify muddy water. Which measurement would best compare how effectively the filters remove visible suspended material?

- A. Measure the room's wall color.
- B. Count how many students watch each filter.
- C. Record only the height of the filter stand.
- D. Measure the turbidity or cloudiness of equal water samples before and after filtering.

97. Which geographic feature most strongly encouraged the growth of many early settlements along major rivers?

- A. Permanent protection from every natural hazard
- B. Access to water, transportation routes, and fertile floodplain soils
- C. A guarantee that no conflicts would occur
- D. Complete isolation from neighboring communities

98. On a map, a scale states 1 inch = 50 miles. What information does the scale provide?

- A. It shows the relationship between distance on the map and actual ground distance.
- B. It identifies the political party of each region.
- C. It explains the elevation of every point automatically.
- D. It determines which direction is north without a compass rose.

99. Which colonial grievance was directly addressed by the Third Amendment to the U.S. Constitution?

- A. The lack of a national postal service
- B. The absence of public universities
- C. The peacetime quartering of soldiers in private homes without the owner's consent
- D. The requirement that all trials use juries of twelve

100. Which principle is illustrated when Congress passes a bill, the president vetoes it, and Congress may attempt to override the veto?

- A. Judicial review only
- B. Federalism only
- C. Popular sovereignty only
- D. Checks and balances

101. A city council holds a public hearing before voting on a zoning proposal. Which democratic principle is most directly supported?

- A. Hereditary succession
- B. Citizen participation in local government
- C. Rule by military decree
- D. Elimination of public deliberation

102. Why did the Erie Canal significantly affect New York's economy in the nineteenth century?

- A. It cut shipping costs and linked interior trade to the Hudson River and Atlantic markets.
- B. It caused western New York farmers to stop producing agricultural goods.
- C. It immediately replaced all roads and railroads used within New York.
- D. It prevented goods and travelers from moving between inland and coastal regions.

103. Which factor was a major cause of the Great Migration of African Americans from the rural South to northern and western cities during the twentieth century?

- A. A federal law requiring every southern resident to move
- B. The disappearance of all northern industries
- C. A ban on rail travel within the United States
- D. The search for greater economic opportunity and escape from racial oppression

104. Which document would be a primary source for studying the experiences of a nurse serving overseas during World War II?

- A. A textbook chapter published in 2015
- B. A recent documentary summarizing wartime medicine
- C. A letter the nurse wrote home in 1944
- D. An encyclopedia article about World War II

105. A historian compares several newspaper accounts of the same protest written by papers with different political viewpoints. Why is this comparison useful?

- A. It helps identify how perspective and selection may shape accounts of the same event.
- B. It guarantees that every detail in every article is false.
- C. It eliminates the need to examine any other evidence.
- D. It proves political viewpoints never affect reporting choices.

106. Which economic concept is illustrated when the price of strawberries rises after a crop failure greatly reduces the quantity available while consumer demand remains strong?

- A. Unlimited supply causing prices to disappear from the market
- B. Barter replacing money in every exchange involving agricultural goods
- C. Scarcity influencing price when available supply falls sharply
- D. A rule requiring every buyer to pay one permanent fixed price

107. A household chooses to postpone buying a new television so it can pay for an emergency car repair. What concept does this decision illustrate?

- A. Unlimited wants being fully satisfied
- B. Opportunity cost and prioritizing limited resources
- C. Inflation being eliminated permanently
- D. Goods becoming free because a choice was made

108. Which level of government is generally responsible for issuing U.S. passports?

- A. A village government
- B. A county school board
- C. A neighborhood association
- D. Federal government

109. Which amendment to the U.S. Constitution prohibited states from denying the right to vote on account of race, color, or previous condition of servitude?

- A. Fifteenth Amendment
- B. First Amendment
- C. Tenth Amendment
- D. Twenty-Second Amendment

110. What is the main purpose of separation of powers in the U.S. federal government?

- A. To eliminate the legislative branch
- B. To give state governors control of federal courts
- C. To divide governmental authority among branches so no single branch exercises all major powers
- D. To make every federal official serve for life

111. Which statement best describes a market economy?

- A. All resources are allocated only by a single central planner.
- B. Many production and purchasing decisions are made through voluntary exchanges among consumers and businesses.
- C. No prices are ever used to guide choices.
- D. Consumers are prohibited from choosing among competing products.

112. A population pyramid has a very wide base compared with its middle and upper sections. What does the wide base most directly indicate?

- A. A relatively large proportion of young people in the population
- B. A complete absence of births
- C. A population made up mostly of older adults
- D. Equal numbers in every age group

113. In visual art, which element refers to the path made by a moving point and can be straight, curved, thick, or thin?

- A. Texture
- B. Value
- C. Form
- D. Line

114. A musical passage gradually becomes louder. Which dynamic marking describes this change?

- A. Diminuendo
- B. Staccato
- C. Crescendo
- D. Fermata

115. In drama, an actor changes posture, gesture, and vocal tone to show that a character is nervous even though the script does not state 'I am nervous.' What skill is the actor using?

- A. Perspective drawing
- B. Characterization through performance choices
- C. Musical notation
- D. Printmaking registration

116. Which activity is aerobic exercise when performed continuously for an appropriate period?

- A. One brief maximal lift
- B. A single ten-second stretch
- C. Sitting quietly
- D. Brisk walking

117. Which food-handling practice best reduces cross-contamination when preparing raw chicken and salad vegetables?

- A. Rinse raw chicken in the sink before cutting vegetables.
- B. Use separate cutting boards or thoroughly wash and sanitize the board before using it for the vegetables.
- C. Use the same unwashed knife for both foods.
- D. Place cooked vegetables back on the plate that held raw chicken.

118. A family compares two loans with the same principal and term. Loan A has a lower annual percentage rate than Loan B and no additional fees. Which loan will generally cost less in interest?

- A. Loan B, because its stated interest rate is higher
- B. Both loans, because equal principal guarantees equal borrowing cost
- C. Loan A, because its annual percentage rate is lower
- D. The loan whose monthly statement uses the largest printed type

119. A student is planning a weekly budget. Which expense is usually classified as fixed rather than variable?

- A. Restaurant meals
- B. Entertainment purchases
- C. Optional snacks
- D. A monthly apartment rent payment

120. Which classroom activity best develops students' career-awareness skills in the elementary grades?

- A. Interview community workers about the tasks, tools, and education connected with different occupations.
- B. Tell students that only one occupation is valuable.
- C. Require students to choose a permanent career immediately.
- D. Avoid discussing how school skills connect with future work.

Practice Exam 9: Answer Key and Explanations

1. A — The student replaces one phoneme with another while keeping the rest of the spoken word intact, which is phoneme substitution. Syllable deletion removes a larger sound unit, rhyme recognition compares word endings, and print directionality concerns how written text is followed across a page rather than manipulating speech sounds. That is the precise distinction tested here.

2. D — In ship, the letters s and h work together to represent one phoneme, /sh/, so sh is a consonant digraph. In stop, crab, and flag, the initial consonants retain their individual sounds within blends. A digraph represents one sound with two letters, while a blend preserves both consonant sounds. That is the precise distinction tested here.

3. B — The derivational suffix -able commonly means capable of or suitable for the action named by the base word. Washable therefore means capable of being washed. Past tense would be marked by -ed, a person who performs an action may use -er, and a meaning of before would require a prefix such as pre-.

4. C — The phrase explaining that water covered nearly every patch of soil provides a direct description of saturated, showing that the marsh was thoroughly wet. The desert contrast helps establish difference, but the explicit explanation gives the strongest meaning clue. Merely naming soil or noticing unlike does not define the unfamiliar word precisely.

5. B — A semicolon can join two closely related independent clauses when no coordinating conjunction is used. The greenhouse was warm and the seedlings grew quickly can each stand alone, so the semicolon is appropriate between them. The comma creates a comma splice, while the other semicolons incorrectly separate a dependent clause or parts of one clause.

6. C — In the correct sentence, the subject is Each, which is singular, so the singular verb glows agrees with it. Phrases such as of the lanterns can distract readers from the actual subject. In the other choices, singular collection and basket take plural verbs, while plural rows is incorrectly paired with the singular verb is.

7. D — The sentence directly identifies memory as a lantern without using like or as, so it is a metaphor. The comparison suggests that memory provides guidance or clarity. A simile makes an explicit like-or-as comparison, alliteration repeats beginning sounds, and onomatopoeia uses words that imitate sounds. That is the precise distinction tested here.

8. A — The details all describe benefits of seed libraries: sharing locally adapted seeds, preserving varieties, and lowering costs. A central idea should encompass the full set of supporting details without adding unsupported absolutes. The other options narrow the audience incorrectly or make claims about climate and store prices that the paragraph does not support.

9. C — A dictionary typically provides pronunciation, part of speech, definitions, and usage information for a specific word, making it the best source. A thesaurus focuses on synonyms and related words rather than complete pronunciation information. A table of contents and a historical atlas organize other kinds of information and would not answer the question.

10. D — The brochure provides practical rules, reasons, and directions that help visitors use the trail safely and effectively, so its main purpose is to inform and guide. It may encourage responsible behavior, but it is not selling equipment, telling a fictional story, or recounting personal memories as its central purpose. That is the precise distinction tested here.

11. A — The directions address the reader directly with the pronoun you, which is characteristic of second-person point of view. First person uses I or we for a narrator who speaks as a participant. Third-person narration refers to characters as he, she, or they and may have limited or broad access to their thoughts.

12. B — The paragraph links an earlier event, the prolonged freeze, to a later result, fewer oranges developing. That relationship is cause and effect, reinforced by therefore. Spatial description organizes information by location, question-and-answer structure responds to an explicit question, and compare-and-contrast organization emphasizes similarities and differences between subjects. That is the precise distinction tested here.

13. B — Repeatedly checking a message, putting on a coat, and waiting at the door are converging clues that the character expects to leave soon. An inference combines textual evidence with reasonable background knowledge. Nothing indicates a reading problem, dislike of coats, or preparation for sleep, so those conclusions are unsupported. That is the precise distinction tested here.

14. C — Persistent generally carries a favorable connotation of continuing effort despite difficulty. Stubborn, obstinate, and unyielding can describe similar resistance to changing course, but they often imply unreasonable inflexibility. Connotation concerns the emotional or evaluative associations of words beyond their basic denotations, so word choice shapes the reader's attitude toward the person.

15. D — A repeated count showing that existing racks are usually full directly demonstrates unmet demand for bicycle parking, so it is relevant evidence for adding more racks. Favorite colors, a poem, and a brand list do not establish a need at the school. Strong argumentative evidence should be relevant, credible, and connected to the claim.

16. A — Repeating the same line at the end of each stanza draws attention to the idea that the river continues despite changing circumstances, reinforcing persistence. Repetition can create rhythm and emphasis, but it does not by itself establish exact syllable counts, remove imagery, or transform a poem into an informational reference entry.

17. C — The surrounding discussion of cold-weather survival and the familiar connection of thermal with heat provide useful clues that thermal insulation reduces heat transfer or heat loss. Skilled readers combine context with morphology and prior knowledge. Ignoring the term or substituting an unrelated familiar phrase would weaken comprehension rather than clarify the technical meaning.

18. A — The teacher presents separate phonemes and asks students to combine them into map, which is phoneme blending. Phoneme deletion removes a sound, syllable counting works with larger spoken units, and letter naming concerns print rather than combining speech sounds. Blending is a key bridge from phonemic awareness to decoding unfamiliar words.

19. B — The student's difficulty concerns the alphabetic principle, so explicit practice connecting graphemes with corresponding phonemes directly addresses the need. Silent reading assumes decoding skill already exists, and copying text or memorizing page numbers does not teach sound-symbol relationships. Instruction should make the connection between written letters and spoken sounds clear and systematic.

20. D — A decodable passage lets students apply recently taught sound-spelling correspondences in connected text, strengthening accurate word recognition. Text dominated by untaught patterns may require guessing or excessive support, while random strings lack meaningful context. Topic interest matters, but initial decoding practice should provide a high proportion of words students can analyze with taught skills.

21. C — Said contains familiar consonant sounds but an unexpected vowel spelling, so instruction should identify both the decodable and irregular parts and provide repeated meaningful practice. Treating all high-frequency words as visual shapes or encouraging guessing undermines orthographic learning. Skipping the word prevents the accurate mapping needed for automatic recognition. That is the precise distinction tested here.

22. A — Sunset is a compound made from two complete words, sun and set. Dividing it into those familiar units reduces decoding load while preserving meaning. A final-e rule does not apply, alphabetical order is unrelated, and neither sun nor set functions as a bound Latin root or prefix in this word.

23. D — Sorting words by the shared prefix re- and discussing the meaning again directly develops morphological awareness. Students see that the same morpheme contributes related meaning across several base words. Letter counting, alphabetizing, and punctuation identification may practice other skills, but they do not focus attention on meaningful components within words.

24. B — The student needs greater fluency, especially phrasing and automaticity. Repeated oral reading with a proficient model and feedback supports smoother, more expressive reading while maintaining accuracy. Letter-name drills target a much earlier skill, copying does not directly improve oral fluency, and ignoring punctuation can reduce phrasing and comprehension rather than help them.

25. A — The question asks students to infer motivation from character actions, values, and story evidence rather than retrieve an explicitly stated detail. A character name and page location are literal recall, while counting paragraphs measures a text feature rather than comprehension. Inferential questions require readers to combine evidence with reasonable background knowledge.

26. C — Partner discussion with sentence frames gives students repeated opportunities to produce academic vocabulary within meaningful cause-and-effect language. The frames support syntax while still requiring students to formulate ideas. Silent work, isolated spelling memorization, and yes-or-no answers provide little productive oral-language practice and do not develop extended academic discourse. That is the precise distinction tested here.

27. D — Examining the student's approximations reveals what phoneme-grapheme correspondences and orthographic patterns the student already controls and where instruction is needed. A simple error count does not show patterns, handwriting is a separate skill, and repeated copying before diagnosis may obscure the evidence that should guide targeted spelling and phonics instruction.

28. B — Multiple-meaning words require readers to consider context. Comparing the bird meaning with the machine meaning and testing each against the construction sentence shows which sense fits. Assuming one fixed meaning or automatically choosing the first familiar meaning prevents flexible vocabulary use, while substituting bird would make the sentence semantically inconsistent.

29. C — Analyzing disagreement into prefix, base, and suffix shows how meaningful morphemes contribute to the whole word. Dis- signals not or opposite, agree supplies the core meaning, and -ment forms a noun. Counting vowels, reversing letters, or finding a rhyme does not reveal how word structure supports vocabulary and comprehension. That is the precise distinction tested here.

30. D — The learner already possesses conceptual knowledge, so visuals, demonstration, and opportunities to explain the idea help map the new English term onto an existing concept. Ignoring prior knowledge wastes a resource, and pronunciation drilling or definition memorization alone does not ensure meaningful vocabulary development or conceptual communication. That is the precise distinction tested here.

31. B — A story map that separates the problem, attempts, and resolution makes the narrative's causal structure visible and focuses attention on how events address the central difficulty. Alphabetical lists and punctuation tallies target unrelated skills, while publication dates do not explain plot development. The organizer directly supports retelling and comprehension of narrative structure.

32. A — Summarizing identifies the most important information already presented and condenses it into a concise statement. Saying that the section explains how beavers alter stream habitats captures its central content. Predicting anticipates what may come next, while wondering and making a personal connection represent different comprehension processes rather than summarization. That is the precise distinction tested here.

33. B — Headings, diagrams, and glossaries support navigation and comprehension in different ways. Asking students to explain how each feature helps them locate, anticipate, or clarify information promotes purposeful use. Ignoring features, counting typography, or copying definitions mechanically does not teach readers when or why to use informational-text supports. That is the precise distinction tested here.

34. C — Repeated curriculum-based measures provide comparable data over time, allowing the teacher to see whether performance is improving at an adequate rate and whether instruction should continue or change. Such probes do not measure intelligence, replace all other evidence, or identify reading preferences. Their key function is ongoing progress monitoring for instructional decisions.

35. D — Prewriting includes generating, selecting, and organizing ideas before drafting. Listing possible claims and grouping reasons and evidence helps students establish an argument structure before writing sentences. Capitalization belongs to editing, replacing repetitive verbs is revision, and posting a finished essay is publication rather than planning. That is the precise distinction tested here.

36. A — Moving a paragraph to place an explanation directly after the idea it develops improves the logical sequence of information and therefore strengthens organization and coherence. Handwriting and spelling are transcription concerns, while source-page numbering concerns documentation. Revision focuses on how effectively ideas are developed, connected, ordered, and communicated to readers.

37. A — Official census or municipal data sources are produced for documenting population information and typically explain their methods, dates, and definitions. An unsigned rumor page lacks clear authority, fiction is not intended as demographic evidence, and a product advertisement has a commercial purpose unrelated to establishing accurate population statistics. That is the precise distinction tested here.

38. D — The response disagrees respectfully and supports the alternative interpretation with textual evidence, which advances academic discussion. Productive discourse requires participants to listen, explain reasoning, and respond to ideas rather than personalities. Unsupported dismissal, ending discussion prematurely, or simply repeating a claim does not build shared understanding or evidence-based reasoning. That is the precise distinction tested here.

39. C — Media creators make choices about which voices, images, sounds, and details to include. Dramatic music and one-sided interviews can frame an issue and influence audience perception even when individual statements are factual. Neutrality is not guaranteed by the video format, the use of music, or the mere presence of interviews.

40. B — Stage directions provide information for actors and directors about movement, expression, tone, setting, or other performance details that are not spoken by characters. They help translate written drama into performance. Definitions, bibliographies, and narration serve different purposes and are not the central function of bracketed performance instructions in a script.

41. D — Add the two shipment totals by place value: $3,875 + 2,469 = 6,344$. Ones give 14, so regroup 1 ten; tens then total 14, hundreds total 13, and thousands total 6 after regrouping. The other choices reflect errors in regrouping or in one place-value column. That is the precise distinction tested here.

42. C — Divide the total flour by the amount per batch: $7\frac{1}{2} \div 1\frac{1}{4}$. Converting to improper fractions gives $15/2 \div 5/4 = 15/2 \times 4/5 = 6$. Therefore six complete batches can be made with the available flour. The distractors result from incorrect fraction operations. That is the precise distinction tested here.

43. A — Convert $11/20$ to a decimal by creating a denominator of 100 or by dividing. Multiplying numerator and denominator by 5 gives $55/100$, which equals 0.55. The other decimals correspond to different fractions of the tank. Checking place value confirms that fifty-five hundredths is exactly equivalent to eleven twentieths. Converting through hundredths makes the equivalence especially clear.

44. B — The ratio 2:5 means each 2 cups of blue correspond to 5 cups of white. Multiplying 2 by 9 gives 18, so multiply 5 by the same factor: $5 \times 9 = 45$. Scaling both quantities by the same factor preserves the proportional relationship in the mixture. That is the precise distinction tested here.

45. D — Set up a proportion using the unchanged concentration. The salt-to-water rate is $9/120$ grams per milliliter. Multiplying by 200 milliliters gives $9 \times 200 \div 120 = 15$ grams. The other choices use an incorrect scale factor or change only one quantity, which would not preserve the original concentration. exactly.

46. C — A 25% discount means the customer pays 75% of the original price. Compute $0.75 \times 72 = 54$, so the sale price is \$54. Alternatively, the discount is $0.25 \times 72 = 18$ and $72 - 18 = 54$. The distractors confuse the discount amount with the final price. That is the precise distinction tested here.

47. B — First find the distance represented by one centimeter: $12 \div 1.5 = 8$ kilometers per centimeter. Then multiply that unit rate by 4 centimeters to obtain 32 kilometers. Because the map scale is proportional, the same rate applies throughout. The other choices do not preserve the stated relationship between map distance and actual distance.

48. A — Let t represent the price of one ticket. The situation is modeled by $3t + 8 = 44$. Subtract 8 from both sides to get $3t = 36$, then divide by 3 to obtain $t = 12$. Substitution confirms that three \$12 tickets plus the \$8 fee total \$44 exactly.

49. A — Distribute 6 first: $6(2m + 1)$ becomes $12m + 6$. Then subtract $4m$ and combine like terms, giving $8m + 6$. The constant remains 6 because the subtracted term contains only m . The distractors result from incomplete distribution, incorrect coefficient subtraction, or combining unlike terms. Careful distribution preserves both coefficients and constants correctly.

50. B — The number of lights increases by 6 from one section to the next. From the first section to the ninth there are 8 increases, so compute $14 + 8(6) = 62$. The other choices correspond to using the wrong number of intervals or adding a different common difference. Each section therefore follows the same arithmetic rule.

51. C — Find 35% of 240 by multiplying $0.35 \times 240 = 84$. Another method is 30% of 240, or 72, plus 5% of 240, or 12, for a total of 84. The remaining options reflect incomplete percentage calculations or different proportions of the total. The distractors can result from changing the operation, mishandling place value, or applying the relationship inconsistently.

52. D — Translate the relationship into an expression: $\text{length} = 2(\text{width}) + 3$. Substituting a width of 5 gives $2(5) + 3 = 13$ meters. The other choices come from omitting the added 3, adding incorrectly, or applying the relationship more than once. A second calculation using the same quantities confirms the keyed value and rules out the other three numerical choices.

53. B — The account starts with \$480 and gains \$35 at the end of each of 8 months. The total increase is $8 \times 35 = \$280$. Adding the increase to the initial balance gives $\$480 + \$280 = \$760$. The distractors correspond to using the wrong number of deposits or adding the monthly amount incorrectly.

54. A — Divide the total ribbon length by the length of each piece: $18 \div 2.4 = 7.5$. This means seven complete 2.4-meter pieces can be cut, with some ribbon left over; an eighth full piece would require more than 18 meters. The distractors do not respect the requirement that each counted piece be complete.

55. C — The recipe uses $2.4 \div 6 = 0.4$ liter per serving. For 15 servings, multiply $0.4 \times 15 = 6$ liters. This method preserves the proportional relationship between servings and broth. The other choices result from scaling by an incorrect factor or miscomputing the unit amount. That is the precise distinction tested here.

56. D — Subtract 4 from both sides to obtain $3x < 15$. Dividing by positive 3 preserves the inequality direction, giving $x < 5$. The inequality sign would reverse only when multiplying or dividing by a negative number. The remaining options result from incorrect isolation of x or reversal of the relation. That is the precise distinction tested here.

57. A — Substitute $m = 6$ into the model: $F = 4.50 + 2.25(6)$. The mileage charge is \$13.50, and adding the \$4.50 starting fee gives \$18.00. The other choices omit the fixed fee, use too few miles, or add an incorrect amount to the mileage charge. That is the precise distinction tested here.

58. B — A 20% increase changes \$50 to $50 \times 1.20 = \$60$. A 20% decrease is then taken from \$60, not the original price: $60 \times 0.80 = \$48$. Equal percentage increases and decreases do not cancel because they are applied to different bases. The other choices ignore this effect. That is the precise distinction tested here.

59. C — Find the area of the outer rectangle and subtract the opening. The outer area is $15 \times 9 = 135$ square centimeters, and the opening is $12 \times 6 = 72$ square centimeters. Therefore the border area is $135 - 72 = 63$ square centimeters. The distractors result from incomplete subtraction or using only one rectangle.

60. D — For a prism, volume equals the area of the base multiplied by the perpendicular height. Here, $36 \text{ square centimeters} \times 7 \text{ centimeters} = 252 \text{ cubic centimeters}$. Adding the measurements or multiplying by an unrelated factor does not measure three-dimensional capacity. Cubic units result from multiplying square units by a linear height.

61. B — The full rectangle has area $12 \times 8 = 96$ square meters. The doorway removes $3 \times 2 = 6$ square meters. Subtracting gives $96 - 6 = 90$ square meters of material remaining. The distractors result from subtracting side lengths instead of areas or from forgetting to remove the doorway area.

62. A — Circumference is $C = 2\pi r$. With $r = 6$ and $\pi \approx 3.14$, $C = 2 \times 3.14 \times 6 = 37.68$ centimeters. The smaller value uses πr , while the larger distractors result from doubling again or confusing circumference with an area-related calculation. The distractors can result from changing the operation, mishandling place value, or applying the relationship inconsistently.

63. D — For a square, area equals side squared. A side length whose square is 144 is 12 inches. Perimeter is four times the side length, so $4 \times 12 = 48$ inches. The distractors confuse the side length, a partial perimeter, or the area itself with the required linear measure. That is the precise distinction tested here.

64. C — The wall, ground, and ladder form a right triangle whose hypotenuse is 10 feet and one leg is 8 feet. By the Pythagorean theorem, $x^2 + 8^2 = 10^2$, so $x^2 = 36$ and $x = 6$. The other distances do not satisfy the required relationship among the three side lengths.

65. A — Temperature change is final temperature minus initial temperature. Here, $5 - (-7) = 5 + 7 = 12$ degrees. On a number line, moving from -7 to 0 accounts for 7 degrees and moving from 0 to 5 adds 5 more. The distractors represent incomplete movement or incorrect handling of the negative sign.

66. D — To find the mean, add all five leaf lengths: $6 + 8 + 8 + 10 + 13 = 45$ centimeters. Then divide by 5 observations to obtain 9 centimeters. The value 8 is both the median and the mode, so choosing it would confuse a different measure of center with the arithmetic mean.

67. B — The median is the middle value after ordering the data, so it remains 5 despite the unusually large value 20. The mean is pulled upward because it uses every value. Range and maximum are not measures of center and are strongly determined by extreme values. Median is therefore the most resistant center measure.

68. C — There are $5 + 3 + 2 = 10$ counters in all, and 3 of them are green. Probability equals favorable outcomes divided by total equally likely outcomes, so the probability is $3/10$. The other fractions do not represent the ratio of green counters to the complete set. That is the precise distinction tested here.

69. C — Each spin has probability $1/4$ of landing on 4. Because the two spins are independent, multiply the probabilities: $1/4 \times 1/4 = 1/16$. The distractors represent the probability of one successful spin or other incorrect combinations rather than the joint probability of both events occurring. That is the precise distinction tested here.

70. D — Convert the part-to-whole ratio to a percent: $28/80 = 0.35$, and $0.35 \times 100 = 35\%$. The other choices confuse the raw count with a percent or use an incorrect denominator or conversion. Percent expresses the portion out of one hundred. A second calculation using the same quantities confirms the keyed value and rules out the other three numerical choices.

71. B — From $x = 1$ to $x = 5$, x increases by 4 while y decreases by 6. The rate of change is $\Delta y/\Delta x = -6/4 = -3/2$. The next pair shows the same changes, confirming the constant rate. The sign must be negative because y decreases as x increases. The repeated change confirms the same linear relationship.

72. A — A 180-degree rotation about the origin changes both coordinate signs: (x, y) becomes $(-x, -y)$. Applying the rule to $(5, -2)$ gives $(-5, 2)$. The other choices change only one sign or interchange the coordinates, which describe different transformations rather than a half-turn around the origin. A half-turn sends every point to the opposite side of the origin.

73. B — Convert each plan dimension separately: 2.5 inches represents 15 feet and 3 inches represents 18 feet. The actual area is $15 \times 18 = 270$ square feet. Multiplying the plan area by only 6 would ignore that area scales in both dimensions, producing an incorrect result. That is the precise distinction tested here.

74. D — The interior angles of every triangle total 180 degrees. Add the two known angles: $48 + 67 = 115$ degrees. Subtract that sum from 180 to find the remaining angle: $180 - 115 = 65$ degrees. The distractors result from arithmetic mistakes or from treating the known-angle sum as the missing angle.

75. A — The interquartile range describes the spread of the middle 50 percent of a data set. It is calculated by subtracting the first quartile from the third quartile: $21 - 12 = 9$. The values 12 and 21 are the quartiles themselves, while 33 is their sum and does not measure spread.

76. C — The error shows a misunderstanding of place-value regrouping, not a lack of practice alone. A concrete or visual model can show why one hundred must be decomposed when subtracting 178 from 402 and can be linked to the written algorithm. Memorization or changing topics would leave the underlying misconception unresolved.

77. B — The student is adding side lengths instead of measuring the number of unit squares covering the rectangle. A 5-by-3 array makes the area visible as 15 unit squares and connects area with multiplication. A number line, addition list, or protractor does not directly show why rectangular area is found by multiplying side lengths.

78. C — An area model paired with an explanation requires students to connect the symbolic decomposition $7(10 + 3)$ with two regions, 7×10 and 7×3 , whose areas combine. Recitation, copying, and timed facts can show memory or fluency but do not demonstrate conceptual understanding of why distribution preserves the product.

79. A — Comparing valid strategies helps students see equivalent relationships among fractions, decimals, division, and proportional reasoning. Explaining why methods agree deepens conceptual understanding and mathematical communication. Requiring a single method or emphasizing speed alone can hide useful reasoning, while avoiding discussion misses an opportunity to connect representations and generalize efficient approaches.

80. D — The student's solution is correct, and asking why division by 4 preserves equality probes conceptual understanding of inverse operations and equivalent equations. Questions about neatness or pencil color do not reveal mathematical reasoning, while encouraging students to skip justification removes evidence of whether they understand the structure underlying the procedure.

81. C — Metal is generally a better thermal conductor than wood, so energy from the hot soup travels along the metal spoon to its handle more quickly. Wood is a poorer conductor and slows that transfer. Neither material creates cold, and the observation does not require different starting temperatures or a complete halt in energy exchange.

82. D — Rusting is a chemical change because iron reacts with oxygen, often in the presence of water, to form new iron-oxide substances with different properties. Melting, cutting, and dissolving can change state, size, or distribution without necessarily creating a new substance. Formation of a new material distinguishes the chemical change. That is the precise distinction tested here.

83. A — Air can be compressed because gas particles are separated by substantial empty space and can be forced closer together. The particles still have mass and remain in motion, and compressed gases exert pressure on their container. The reduced volume of the sealed air provides direct evidence of gas compressibility. That is the precise distinction tested here.

84. B — Cloud droplets form when water vapor cools and changes from a gas to liquid water. That phase change is condensation. Evaporation is the reverse liquid-to-gas process, sublimation changes a solid directly to gas, and melting changes a solid to liquid. The stem specifically describes vapor becoming suspended liquid droplets as air cools.

85. C — Visible layers of compacted sediment are characteristic of many sedimentary rocks, which form when sediments are deposited, compacted, and cemented. Intrusive igneous rocks crystallize from magma underground, metamorphic rocks change under heat and pressure without complete melting, and magma is molten material rather than a solid rock type. That is the precise distinction tested here.

86. A — The Moon is always half illuminated by the Sun, but as it orbits Earth, the angle among the Sun, Earth, and Moon changes. From Earth we therefore see different fractions of the illuminated half, producing phases. Earth's shadow causes lunar eclipses, not ordinary monthly phases, and the Moon does not generate its own visible light.

87. B — A controlled experiment changes one independent variable while holding other relevant conditions constant. Here, the plants are identical and water and temperature are kept the same, while light exposure differs. Therefore light availability is the independent variable being tested. The other listed conditions are controlled variables in the design. That is the precise distinction tested here.

88. D — Roots anchor many plants and contain tissues and root hairs that absorb water and dissolved mineral nutrients from soil. Petals primarily help attract pollinators, anthers produce pollen, and fruits develop from reproductive structures and often protect or disperse seeds. The absorption function identifies roots as the best answer. That is the precise distinction tested here.

89. B — Grass is a producer because it captures light energy through photosynthesis and makes organic food from simpler materials. Rabbits obtain energy by eating plants and are consumers, while foxes obtain energy by eating other animals. The food relationship begins with the producer that introduces captured solar energy into the ecosystem.

90. D — The circulatory system uses the heart, blood, and blood vessels to move materials throughout the body, including oxygen, nutrients, hormones, and wastes. The skeletal system provides support and protection, the integumentary system forms a protective body covering, and the reproductive system is specialized for producing offspring rather than systemic transport.

91. C — An object can experience forces even when it does not move. If the box remains at rest, the horizontal forces are balanced so the net horizontal force is zero; gravity and the supporting normal force are also balanced vertically. Motion is not required for forces to exist, and gravity continues acting.

92. A — Electric current requires a closed conducting path through the circuit. Disconnecting a wire opens that path, so current cannot flow through the bulb. The battery does not necessarily lose its stored energy, the bulb does not permanently become an insulator, and ordinary air does not replace the missing conductor in this circuit.

93. C — The vibrating rubber band directly links mechanical vibration with the production of sound: when the band moves back and forth, it causes nearby air to vibrate and a tone is heard. Shadows, magnetism, and freezing demonstrate unrelated physical phenomena and provide no direct evidence about the source of sound waves.

94. A — Large bodies of water heat and cool relatively slowly compared with many land surfaces, moderating nearby air temperatures. This can reduce temperature extremes in coastal areas. Water still contains and exchanges thermal energy, does not block all sunlight from adjacent land, and has no effect that stops Earth's rotation near coastlines.

95. B — Folding a sheet into ridges or channel-like shapes increases structural stiffness by changing its geometry, helping it resist bending under load. Wetting paper weakens many paper fibers, cutting it into disconnected pieces destroys a continuous load path, and making the sheet thinner generally reduces stiffness rather than increasing it. That is the precise distinction tested here.

96. D — Turbidity measures the cloudiness caused by suspended particles, so comparing turbidity before and after treatment directly evaluates how well each filter removes visible material. Wall color, observer count, and stand height do not measure the target outcome. A fair comparison should use equal samples and a variable tied to the design goal.

97. B — Major rivers supplied water, supported agriculture through fertile floodplain soils, and often provided transportation and trade routes, making nearby locations attractive for settlement. Rivers could also flood and did not guarantee peace or isolation. Geographic advantages influence settlement patterns by creating opportunities as well as environmental risks. That is the precise distinction tested here.

98. A — A map scale allows readers to convert a measured distance on the map into an approximate real-world distance. Political affiliation requires different information, elevation is usually represented with contours or other symbols, and direction is shown through orientation indicators such as a compass rose. Scale specifically connects map distance with ground distance.

99. C — The Third Amendment restricts the quartering of soldiers in private homes, reflecting colonial experiences with British quartering practices. Postal administration, universities, and a fixed jury size are not the amendment's subject. The amendment is part of the Bill of Rights and protects a specific aspect of security and privacy in the home.

100. D — The Constitution gives different branches powers that can limit or respond to one another. A presidential veto checks Congress, while Congress can override a veto with the required supermajority, illustrating checks and balances. Federalism concerns national-state relations, popular sovereignty concerns authority from the people, and judicial review concerns courts evaluating laws.

101. B — A public hearing gives residents an opportunity to receive information, express views, and influence local decision making before elected officials act. That process supports citizen participation and deliberation. Hereditary succession and military decree are nondemocratic methods of authority, while eliminating deliberation would reduce rather than strengthen public involvement in government.

102. A — The Erie Canal linked the Great Lakes region with the Hudson River system, helping goods and people move more cheaply between the interior and eastern markets. This supported trade and growth in New York. It did not eliminate agriculture, replace every other transportation route, or prevent regional movement; it expanded transportation connections.

103. D — Millions of African Americans moved from the South in search of industrial and other employment opportunities and to escape Jim Crow segregation, racial violence, and discrimination. The movement was not required by a federal relocation law, and northern industry had not disappeared. Transportation networks helped enable migration rather than being banned.

104. C — A letter written by the nurse during the period is a firsthand record created by a participant and therefore a primary source for studying her experiences. Textbooks, documentaries, and encyclopedia articles created later synthesize or interpret evidence from the past and are generally secondary sources for this research question. That is the precise distinction tested here.

105. A — Comparing accounts from different viewpoints can reveal which facts are shared, which details are emphasized or omitted, and how interpretation differs. Perspective does not make every statement false, and one source set cannot eliminate the need for broader evidence. Historical analysis benefits from corroborating multiple sources and considering authorship and purpose.

106. C — A crop failure reduces the available supply of strawberries. When demand remains relatively strong while supply becomes scarcer, buyers compete for fewer goods and prices can rise. This reflects scarcity and supply-demand interaction. It does not represent unlimited supply, replacement of money with barter, or a permanent fixed price unrelated to market conditions.

107. B — Households have limited resources and must choose among competing uses. Spending money on the urgent repair means giving up or delaying the television purchase, which represents an opportunity cost. The choice does not eliminate scarcity, inflation, or prices; it demonstrates prioritization under a budget constraint and the tradeoffs created by limited resources.

108. D — U.S. passports document nationality and international travel authorization, functions handled by the federal government through the U.S. Department of State. Village governments, school boards, and neighborhood associations have local or private responsibilities and do not issue national passports. The function reflects the federal government's role in foreign affairs and citizenship documentation.

109. A — The Fifteenth Amendment, ratified in 1870, states that the right of U.S. citizens to vote shall not be denied or abridged by the United States or a state because of race, color, or previous condition of servitude. The other listed amendments address different constitutional subjects and protections. That is the precise distinction tested here.

110. C — Separation of powers assigns legislative, executive, and judicial functions to different branches. Dividing authority helps prevent concentration of power and supports checks and balances among institutions. The principle does not eliminate a branch, transfer federal courts to governors, or require life terms for every official. It structures how national power is distributed.

111. B — In a market economy, decentralized decisions by consumers and producers, along with prices and voluntary exchange, play a major role in allocating resources. Real economies may mix market and government elements, but a system directed only by one planner is command-oriented. Eliminating prices or consumer choice contradicts core market mechanisms.

112. A — The base of a population pyramid represents younger age groups. A wide base therefore indicates that children and other young cohorts make up a relatively large share of the population. A narrow base would suggest fewer young people. The graph does not imply zero births, an elderly majority, or equal age-group sizes.

113. D — Line is an element of art defined by a path or mark that can vary in direction, width, and character. Texture concerns how a surface feels or appears to feel, value refers to relative lightness and darkness, and form describes three-dimensional volume. The examples in the stem specifically describe qualities of line.

114. C — Crescendo directs performers to increase loudness gradually over a passage. Diminuendo indicates becoming softer, staccato concerns short detached articulation, and a fermata indicates sustaining a note or rest beyond its usual duration. The question describes a change in dynamic level, specifically increasing volume, which corresponds to crescendo. That is the precise distinction tested here.

115. B — The actor communicates a character trait or emotional state through physical and vocal choices, which is characterization in performance. Perspective drawing is a visual-art technique, musical notation represents sound, and printmaking registration aligns printed layers. Gesture, posture, and tone are dramatic tools for conveying character beyond the literal dialogue. That is the precise distinction tested here.

116. D — Brisk walking uses large muscle groups rhythmically and, when sustained, raises heart rate and breathing enough to count as aerobic physical activity. A single maximal lift is primarily strength-focused, one short stretch emphasizes flexibility, and sitting quietly is sedentary. Aerobic activity involves sustained movement that increases cardiorespiratory demand. That is the precise distinction tested here.

117. B — Raw poultry can carry harmful microorganisms, so keeping its juices and utensils away from ready-to-eat foods reduces cross-contamination. Separate equipment or proper washing and sanitizing between uses is appropriate. Rinsing raw chicken can spread droplets, and reusing unwashed knives, boards, or plates transfers contamination to foods that may not be cooked afterward.

118. C — With the same principal and term and no offsetting fees, the loan with the lower annual percentage rate generally imposes a lower borrowing cost. APR is designed to help compare credit costs. A higher rate would normally increase interest expense, while document appearance has no relationship to the mathematical cost of borrowing.

119. D — A fixed expense tends to remain the same for a defined period and is owed on a regular schedule, as with a set monthly rent payment. Restaurant meals, entertainment, and optional snacks can vary substantially depending on choices and frequency. Distinguishing fixed from variable expenses helps people plan predictable obligations within a budget.

120. A — Interviewing workers exposes students to a range of occupations and helps them connect job tasks, tools, education, and school learning. Elementary career awareness should broaden understanding rather than force an early permanent choice. Ranking one career as uniquely valuable or avoiding school-to-work connections would narrow exploration instead of developing informed awareness.