

PRACTICE EXAM 5: NYSTCE MULTI-SUBJECT TEACHERS OF CHILDHOOD (GRADES 1-6) (120 QUESTIONS)

This practice exam contains 120 selected-response questions: 40 Literacy and English Language Arts, 40 Mathematics, and 40 Arts and Sciences. The official NYSTCE Multi-Subject: Teachers of Childhood (Grades 1-6) test 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 teacher says /m/ /ap/ and asks a child to combine the parts into a word. The child says map. Which phonological-awareness skill is the child using?

- A. Onset-rime blending
- B. Phoneme deletion
- C. Syllable counting
- D. Alphabet naming

2. A student sees the unfamiliar word reusable and recognizes re-, use, and -able. Which knowledge most directly supports determining the word's meaning?

- A. Knowledge of alphabetical order
- B. Knowledge of rhyme schemes
- C. Knowledge of punctuation marks
- D. Knowledge of morphemes and affixes

3. In the sentence 'The crane lifted the steel beam,' a student uses the surrounding words to decide that crane names a machine rather than a bird. Which vocabulary strategy is the student using?

- A. Counting syllables in the spoken word
- B. Using semantic context to select a word meaning

- C. Applying a familiar spelling rule to the word
- D. Identifying capitalization and punctuation in the sentence

4. A biography describes a scientist's childhood, university years, early experiments, and later discoveries in the order they occurred. Which text structure is most prominent?

- A. Compare and contrast
- B. Problem and solution
- C. Chronological sequence
- D. Cause and effect only

5. A narrator says, 'I tucked the map into my backpack and hoped my cousins would not notice how nervous I was.' Which point of view is used?

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

6. In a story, two siblings repeatedly argue while building a kite, but they succeed only after listening to each other's ideas and dividing the work. Which theme is best supported?

- A. Kites should be built only on windy days.
- B. Cooperation can help people accomplish a difficult goal.
- C. Arguments always prevent people from finishing projects.
- D. Older siblings should make every important decision.

7. An editorial claims the town library should remain open later and cites survey results showing that many families can visit only after 6:00 p.m. What is the function of the survey results?

- A. They replace the claim with a narrative.

- B. They introduce an unrelated topic.
- C. They provide evidence relevant to the claim.
- D. They serve as a figurative comparison.

8. Which sentence contains personification?

- A. The old porch groaned as the storm wind pushed against it.
- B. The porch was made of weathered pine boards.
- C. The porch was as narrow as a hallway.
- D. The porch stood ten feet from the garden.

9. A writer changes 'The dog looked at the stranger' to 'The dog glared at the stranger.' What does the revision most clearly change?

- A. It adds a more hostile connotation.
- B. It changes the sentence to future tense.
- C. It makes stranger the grammatical subject.
- D. It removes the action from the sentence.

10. Which sentence uses pronouns clearly and correctly?

- A. When Maya handed Elena the folder, she said to put it there, although nobody knew who she meant.
- B. Carlos told Jamal that he should revise his essay, but the sentence gives no clue who should revise.
- C. When Maya handed Elena the folder, Maya said, 'Please put it on the desk.'
- D. The teachers met the parents after they finished the conference, though they could refer to either group.

11. Students are studying how residents experienced a major neighborhood blackout twenty years ago. Which source would be a primary source?

- A. A recent encyclopedia entry about electrical systems

- B. A recorded interview with a resident who experienced the blackout
- C. A textbook paragraph summarizing urban infrastructure
- D. A modern article comparing several historical blackouts

12. A social-media post claims a new study proves that one breakfast food makes every child score higher on tests, but the post gives no author, study link, or data. What should a critical reader do first?

- A. Accept the claim because it mentions a study.
- B. Share the post before checking whether it is accurate.
- C. Judge the claim only by the number of likes it received.
- D. Look for the original study and evaluate its source, methods, and evidence.

13. Which sentence is a complex sentence?

- A. The rain stopped, and the players returned.
- B. The muddy field delayed the game.
- C. Rain fell throughout the afternoon.
- D. Although the rain stopped, the field remained muddy.

14. A student reads, 'When the surprise assembly was announced, Luis was all ears.' What does the idiom all ears mean in this context?

- A. He was listening with great attention.
- B. He was covering his ears.
- C. He could hear only one sound.
- D. He was drawing a picture of ears.

15. A novel tells an invented story about a child living in New York during the opening of the Erie Canal and includes accurate details about clothing, travel, and work of the period. Which genre best describes the novel?

- A. Science fiction
- B. Biography
- C. Historical fiction
- D. Procedural nonfiction

16. Which sentence uses a colon correctly?

- A. The hikers: packed water, a map, and a flashlight.
- B. The hikers packed three essentials: water, a map, and a flashlight.
- C. The hikers packed: three essentials for the trip.
- D. The hikers packed water: and carried a map.

17. During a discussion, a student says, 'So your point is that the character left because she felt responsible, not because she was afraid. Is that right?' Which listening skill is the student demonstrating?

- A. Interrupting to change the topic
- B. Memorizing the speaker's exact wording
- C. Evaluating handwriting conventions
- D. Paraphrasing to confirm understanding

18. A kindergarten teacher points to the letter m, says /m/, and has students repeat the sound while tracing the letter. What foundational concept is the lesson emphasizing?

- A. The alphabetic principle that letters represent speech sounds
- B. That every word has one syllable
- C. That pictures determine a word's pronunciation
- D. That punctuation marks represent consonants

19. A teacher says the word ship and asks students to move one counter for each sound they hear. How many counters should a student move?

- A. Two
- B. Four
- C. Three
- D. Five

20. Which word is most useful for explicitly teaching the consonant digraph th?

- A. stop
- B. clap
- C. mint
- D. thin

21. A first-grade student can read hop but reads hope as hop. Which instructional focus would most directly address the error?

- A. Practice naming punctuation marks in short sentences.
- B. Teach the silent-e pattern that can signal a long vowel.
- C. Teach alphabetical order using familiar word lists.
- D. Practice identifying story characters and their actions.

22. A student encounters the word robot and needs help dividing it for decoding. Which division is most appropriate for a basic syllable-reading strategy?

- A. ro/bot
- B. r/obot
- C. rob/ot
- D. robo/t

23. A teacher groups jumped, jumping, and jumps around the base word jump. What is the most important concept for students to notice?

- A. Every ending creates an unrelated word.
- B. The base word changes its first phoneme each time.
- C. Inflectional endings change grammatical information while preserving the base meaning.
- D. Inflectional endings are punctuation marks.

24. A beginning reader repeatedly misreads the high-frequency word said because the student tries to pronounce each letter using the most common sound. Which approach is most appropriate?

- A. Require the student to guess said from the picture.
- B. Teach the regular and unexpected sound-spelling parts of said and practice mapping the word.
- C. Tell the student to skip the word whenever it appears.
- D. Ask the student to memorize only the overall outline of the word.

25. A student reads a grade-level passage accurately but in a slow, word-by-word voice with little phrasing. Which instructional activity best targets the need?

- A. Model fluent reading and use repeated oral reading with feedback on phrasing and pace.
- B. Assign more difficult silent reading without oral feedback.
- C. Practice copying the same passage several times neatly.
- D. Focus only on identifying nouns and other word classes.

26. A school wants a brief measure for all first graders at the beginning of the year to identify who may need a closer look at foundational reading skills. What type of assessment is most appropriate?

- A. A final report-card grade
- B. A long-term portfolio only
- C. A universal screening measure
- D. An end-of-year state assessment only

27. A student can decode one-syllable words but struggles with the word unbelievable. Which strategy is most appropriate?

- A. Guess the word from its first letter only.
- B. Skip every word longer than six letters.
- C. Read only the final syllable and infer the rest.
- D. Identify meaningful parts and syllables, then blend the parts into the whole word.

28. A student spells train as tran. Which instructional contrast would best address the missing vowel-team pattern?

- A. Practice words that begin with tr without discussing vowels.
- B. Compare words such as train, rain, and tail while mapping /ā/ to ai.
- C. Copy the word train repeatedly without saying its sounds.
- D. Sort words only by the number of letters they contain.

29. While reading, a student sees the sentence "The desert air was arid, so the hikers carried extra water." Which teacher prompt best supports using context to infer arid?

- A. How many letters are in the word arid?
- B. Which letter comes before a in the alphabet sequence?
- C. Can you copy the word arid three times neatly?
- D. What clue in the sentence suggests what kind of air would make hikers need extra water?

30. After hearing a story, a student can name characters but leaves out the main problem and resolution when retelling. Which scaffold is most appropriate?

- A. Have the student alphabetize every character name.
- B. Ask the student to copy the first paragraph.
- C. Use a story map with characters, setting, problem, major events, and resolution.
- D. Provide a list of unrelated vocabulary words.

31. A passage states that a playground is empty, puddles cover the pavement, and children are looking through classroom windows. Which prompt best supports an inference?

- A. What probably happened to recess, and which details support your answer?
- B. How many times does the letter p appear?
- C. Which sentence has the most words?
- D. What is the first word in the passage?

32. Before students read a chapter titled 'How Volcanoes Change Landscapes,' a teacher has them examine the heading, labeled sidebars, and captions. What is the main purpose?

- A. Teach students to ignore the body paragraphs.
- B. Help students use text features to preview organization and important information.
- C. Replace reading with a picture walk only.
- D. Assess handwriting speed.

33. A student receiving decoding intervention shows little improvement across six weekly progress-monitoring checks. What is the most appropriate next step?

- A. Continue exactly the same instruction indefinitely without reviewing results.
- B. Stop measuring progress because the scores are low.
- C. Assume the student cannot learn to decode and remove reading instruction.
- D. Review the data and intensify or adjust the intervention while continuing to monitor progress.

34. A teacher wants students to remember the spelling of the word chest after they can already segment /ch/ /e/ /s/ /t/. Which activity best supports orthographic mapping?

- A. Have students memorize the silhouette of the word.
- B. Ask students to guess chest from a picture each time.
- C. Have students connect each phoneme to its grapheme sequence and read and spell chest from memory.
- D. Have students recite the alphabet without using the word.

35. Students are planning an informative report about urban pollinators. Which first step best supports an effective report?

- A. Choose decorative borders and fonts before deciding what to explain.
- B. Develop a focused topic and gather reliable information that can be organized into related subtopics.
- C. Write the conclusion before researching or organizing the topic.
- D. Collect unrelated facts without sorting them into related ideas.

36. A student is revising a personal narrative about getting lost briefly at a fair. Which revision would most strengthen the narrative?

- A. Add precise sensory details and a sequence showing how the problem developed and was resolved.
- B. Replace the events with a list of unrelated definitions.
- C. Remove time-order words that help readers follow the events.
- D. Add statistics about fairs that do not advance the story.

37. During a class discussion of a novel, which teacher prompt best encourages students to build on one another's ideas?

- A. Who can repeat Jordan's words exactly without responding?
- B. Who can change the subject to a different book?
- C. Who can add to Jordan's interpretation by citing another detail from the chapter?
- D. Who agrees without giving a reason?

38. Students have gathered information from three sources for a research paragraph. Which instruction best helps them avoid plagiarism?

- A. Change only one or two words from each source and omit attribution.
- B. Copy entire sentences whenever the information is factual.
- C. Use information from any website without recording where it came from.
- D. Paraphrase ideas in their own words, use quotation marks for exact language, and identify the source when required.

39. A student has written a persuasive letter asking the principal to add a shaded outdoor reading area. Which revision would most strengthen the argument?

- A. Add relevant evidence about student use of outdoor spaces and explain how it supports the request.
- B. Add several unrelated adjectives about the school mascot.
- C. Remove the claim so the reader must infer the request.
- D. Repeat the same opinion sentence five times.

40. A teacher is conferencing with a student whose explanatory essay has strong ideas but abrupt connections between paragraphs. Which feedback is most useful?

- A. Replace every verb with a longer synonym.
- B. Add transitions that show how each paragraph's idea relates to the next.
- C. Delete the topic sentences from all paragraphs.
- D. Add more exclamation points to increase emphasis.

41. A teacher has 6 boxes with 24 markers in each box. After giving 37 markers to students, how many markers remain?

- A. 181
- B. 117
- C. 107
- D. 97

42. Which decimal is equivalent to $\frac{7}{20}$?

- A. 0.07
- B. 0.35
- C. 0.28
- D. 0.70

43. What is the value of the digit 6 in 462,715?

- A. 6,000
- B. 600,000
- C. 600
- D. 60,000

44. A school garden uses 3 bags of compost for every 8 garden beds. At the same rate, how many bags are needed for 24 beds?

- A. 9 bags
- B. 6 bags
- C. 12 bags
- D. 64 bags

45. A water pump transfers 84 liters into a tank in 7 minutes at a steady rate. How many liters does it transfer each minute?

- A. 12 liters per minute
- B. 9 liters per minute
- C. 19.5 liters per minute
- D. 27 liters per minute

46. During a promotion, an \$80 museum membership is reduced by one quarter of its regular price. What amount does a customer pay?

- A. \$20
- B. \$55
- C. \$75
- D. \$60

47. A science club plants 21 seeds and observes that 14 sprout. Which ratio expresses sprouted seeds to planted seeds in simplest form?

- A. 3:4
- B. 7:9
- C. 2:3
- D. 14:42

48. A recipe uses 2.5 cups of oats for 10 servings. How many cups of oats are used per serving?

- A. 0.4 cup
- B. 0.25 cup
- C. 2.5 cups
- D. 4 cups

49. A floor plan uses a scale of 1 inch for every 12 feet of actual distance. A corridor measures 7.5 inches on the plan. How long is the real corridor?

- A. 19.5 feet
- B. 62.5 feet
- C. 144 feet
- D. 90 feet

50. A warehouse contains 240 boxes of classroom materials. If 35% of the boxes contain science kits, how many boxes contain science kits?

- A. 72
- B. 96
- C. 84
- D. 205

51. Membership in a school club rises from 50 students in September to 65 students in October. By what percent did membership increase?

- A. 15%
- B. 30%
- C. 23%
- D. 130%

52. A class mixes red and white paint in a ratio of 4:5. If 20 cups of white paint are used, how many cups of red paint are needed?

- A. 16 cups
- B. 15 cups
- C. 25 cups
- D. 80 cups

53. Four freezer sensors show -1.8°C , -1.2°C , -2.1°C , and -3.0°C . Which sensor reading is warmest?

- A. -1.8°C
- B. -1.2°C
- C. -2.1°C
- D. -3°C

54. A submarine is at -120 meters relative to sea level and rises 35 meters. What is its new position?

- A. -155 meters
- B. 85 meters
- C. -85 meters
- D. -35 meters

55. A teacher has 42 red counters and 56 blue counters and wants to make the greatest possible number of identical kits with no counters left over. How many kits can be made?

- A. 7
- B. 28
- C. 98
- D. 14

56. Two hallway signals sound at regular intervals. One sounds every 8 minutes and the other every 12 minutes. If they sound together now, after how many minutes will they next sound together?

- A. 24
- B. 4
- C. 20
- D. 48

57. A container holds 0.625 liter of solution. Which fraction of a liter represents the same amount?

- A. $\frac{5}{8}$
- B. $\frac{3}{5}$
- C. $\frac{5}{6}$
- D. $\frac{7}{10}$

58. A student earned 18 points out of 24 possible points. What percent of the points did the student earn?

- A. 60%
- B. 72%
- C. 80%
- D. 75%

59. A board-game score is found by adding 4 points to three times the difference between 6 and 2. What is the score?

- A. 28
- B. 16
- C. 10
- D. 13

60. Five identical notebooks and a \$7 folder cost \$32 altogether. If each notebook costs x dollars, what is the price of one notebook?

- A. 3
- B. 7
- C. 5
- D. 25

61. A rectangle has length 11 centimeters and width 7 centimeters. What is its area?

- A. 36 square centimeters
- B. 18 square centimeters
- C. 77 square centimeters
- D. 154 square centimeters

62. A stackable storage bin has inside dimensions of 4 centimeters by 3 centimeters by 6 centimeters. How much three-dimensional space is inside the bin?

- A. 72 cubic centimeters
- B. 13 cubic centimeters
- C. 36 cubic centimeters
- D. 144 cubic centimeters

63. The points (2, 3) and (2, 9) are endpoints of a vertical segment. What is the segment's length?

- A. 11 units
- B. 6 units
- C. 4 units
- D. 12 units

64. A triangular fabric banner has a 10-meter base and a perpendicular height of 7 meters. How many square meters of fabric cover one side?

- A. 70 square meters
- B. 17 square meters
- C. 34 square meters
- D. 35 square meters

65. A square has a perimeter of 36 inches. What is the length of one side?

- A. 9 inches
- B. 6 inches
- C. 18 inches
- D. 144 inches

66. A class recorded these numbers of books read: 3, 5, 5, 7, 10. What is the mean?

- A. 5
- B. 7
- C. 6
- D. 30

67. For the data set 4, 6, 6, 8, 11, what is the median?

- A. 7
- B. 6
- C. 8
- D. 35

68. A bag contains 5 blue marbles, 3 green marbles, and 2 yellow marbles. If one marble is chosen at random, what is the probability it is green?

- A. $\frac{1}{3}$
- B. $\frac{3}{7}$
- C. $\frac{7}{10}$
- D. $\frac{3}{10}$

69. An angle measures 125° . How should the angle be classified?

- A. Acute
- B. Right
- C. Straight
- D. Obtuse

70. Two angles form a straight line. One angle measures 68° . What is the measure of the other angle?

- A. 22°
- B. 112°
- C. 68°
- D. 248°

71. A room is 12 feet long and 9 feet wide. Carpet costs \$4 per square foot. What is the total carpet cost for the room?

- A. \$432
- B. \$84
- C. \$108
- D. \$336

72. A line passes through (0, 2) and (3, 8). What is its slope?

- A. $\frac{1}{2}$
- B. 3
- C. 2
- D. 6

73. The rule $y = 4x - 1$ is used to generate values. What is y when $x = 6$?

- A. 19
- B. 23
- C. 24
- D. 29

74. A box plot shows a minimum of 4, first quartile of 7, median of 10, third quartile of 15, and maximum of 19. What is the interquartile range?

- A. 8
- B. 6
- C. 11
- D. 15

75. A water tank contains 18 gallons and is filled at a constant rate of 5 gallons per minute. Which expression gives the amount of water after m minutes?

- A. $18m + 5$

- B. $23m$
- C. $18 - 5m$
- D. $18 + 5m$

76. Several students solve $402 - 178$ by subtracting each smaller digit from the larger digit in the same column, producing 376. Which teacher response best addresses the misconception?

- A. Tell students to memorize the answer 224 without discussing place value.
- B. Move immediately to larger subtraction problems using the same procedure.
- C. Model regrouping with base-ten blocks, then connect the exchanges to the written algorithm.
- D. Avoid place-value models because they may temporarily slow calculation practice.

77. A student says $\frac{3}{8}$ is greater than $\frac{1}{2}$ because 8 is greater than 2. Which instructional move is most appropriate?

- A. Confirm the student's denominator rule and apply it to every fraction.
- B. Teach the student to compare only the denominators in each fraction.
- C. Have the student ignore numerators and draw shapes unrelated to the fractions.
- D. Use a common whole and fraction models or equivalent fractions to compare the sizes of the two fractions.

78. Students are learning area formulas. Which activity best helps them understand why the area of a parallelogram is base times height?

- A. Rearrange the parallelogram into a rectangle with the same base and perpendicular height.
- B. Memorize the area formula and practice substituting numbers without a diagram.
- C. Measure only the slanted side lengths and compare those measurements repeatedly.
- D. Count the vertices of several parallelograms and record the totals in a table.

79. A teacher asks students to solve $36 \div 4$ in two ways and explain how the methods are related. What mathematical practice is the teacher most directly promoting?

- A. Avoiding communication during problem solving
- B. Reasoning about multiple representations and explaining relationships among strategies
- C. Memorizing one procedure as the only valid method
- D. Replacing calculation with estimation in every problem

80. A class collected data on daily reading minutes. Which teacher question best moves students beyond making a graph to interpreting the data?

- A. Which marker color should we use to make the graph title?
- B. Can you copy every numerical value shown on the graph?
- C. What is a typical reading time, and what evidence in the graph supports it?
- D. How many letters are contained in the word data?

81. A plant is placed near a sunny window and bends gradually toward the light. Which explanation best accounts for the plant's response?

- A. The plant is converting into a nonliving object.
- B. Gravity has stopped acting on the plant.
- C. Growth is influenced by a directional response to light.
- D. The leaves are producing sound energy that pulls the stem.

82. A student places identical ice cubes on a metal tray and a wooden board in the same room. The ice on the metal melts faster. What is the best explanation?

- A. Metal transfers thermal energy to the ice more readily than wood does.
- B. Metal creates cold while wood creates heat.
- C. Wood has no thermal energy at room temperature.
- D. The ice on metal has a different melting point.

83. Which change is a chemical change?

- A. Ice melting into liquid water
- B. Paper being cut into strips
- C. Sugar dissolving in water
- D. Iron forming rust after exposure to oxygen and moisture

84. A flashlight does not light even though its bulb is working. The batteries are inserted with both positive ends facing the same direction when the device requires opposite orientation. Why does the flashlight fail?

- A. The bulb has changed into a small permanent magnet.
- B. The circuit is not arranged to provide the required potential difference through the bulb.
- C. The batteries have suddenly changed into electrical insulators.
- D. Light can travel through the device only when its circuit is open.

85. An observer records a repeating sequence from crescent to quarter to gibbous to full Moon and then back again. Which model best explains the sequence?

- A. Earth's shadow covers the Moon every night.
- B. The Moon produces different amounts of its own light.
- C. Observers see different portions of the Moon's sunlit half as the Moon orbits Earth.
- D. Clouds permanently hide different parts of the Moon.

86. A spoon appears bent where it enters a glass of water. Which phenomenon best explains the observation?

- A. Reflection of sound waves from the glass surface
- B. Magnetic attraction between the spoon and water molecules
- C. Chemical decomposition of the metal inside the water
- D. Refraction of light as it passes between air and water

87. Two objects have the same volume, but object X has twice the mass of object Y. How do their densities compare?

- A. They have the same density.
- B. Object X has twice the density of object Y.
- C. Object X has half the density of object Y.
- D. Density cannot be compared when volume is equal.

88. A student pushes the same toy car with greater force on the same smooth floor. What change is most likely?

- A. The car's acceleration increases.
- B. The car's mass immediately increases.
- C. Gravity stops acting on the car.
- D. The floor becomes a vacuum.

89. In a food web, grass is eaten by rabbits, and rabbits are eaten by hawks. What role does the grass play?

- A. Primary consumer
- B. Producer
- C. Secondary consumer
- D. Decomposer

90. A lake receives excessive fertilizer runoff, causing rapid algal growth. When much of the algae later dies, what change can harm fish?

- A. Decomposition can reduce dissolved oxygen in the water.
- B. The water gains unlimited oxygen from decomposition.
- C. Fish begin performing photosynthesis.
- D. The lake stops containing microorganisms.

91. Which process moves water vapor from plant leaves into the atmosphere?

- A. Condensation
- B. Precipitation
- C. Transpiration
- D. Freezing

92. A region experiences an earthquake along a fault. What is the immediate source of the seismic waves?

- A. Sunlight heating the ocean surface near the fault zone
- B. Clouds condensing water vapor in the atmosphere above the fault
- C. Plants releasing water vapor from leaves near the ground surface
- D. A sudden release of stored energy as rocks move along the fault

93. A student wants to test whether fertilizer amount affects bean-plant height. Which variable should be kept the same for all groups to make the test fair?

- A. The amount of fertilizer
- B. The measured plant height
- C. The final conclusion
- D. The amount of light each group receives

94. An engineer tests three bridge models made from the same material but with different truss patterns. What is the best reason to repeat the load test several times for each design?

- A. Repeated trials help reveal variation and improve confidence in the comparison.
- B. Repeated trials guarantee every model will have identical results.
- C. Repeating removes the need to measure the load.
- D. Repeating changes the independent variable automatically.

95. Which statement best describes a renewable energy resource?

- A. It can be used without producing any environmental effects.
- B. It is replenished naturally on a time scale that supports continued human use.
- C. It is a resource that must always be found underground.
- D. It is produced only when fossil fuels are burned for energy.

96. A student designs a water filter using gravel, sand, and cloth. Which statement best describes a limitation of this model?

- A. It turns all water into pure hydrogen and oxygen.
- B. It proves filtered water is safe to drink in every case.
- C. It may remove some suspended particles but does not guarantee removal of dissolved substances or microorganisms.
- D. It can remove only particles larger than the entire container.

97. Congress debates amendments to a bill and then votes on whether to pass it. Which constitutional function is Congress carrying out?

- A. Interpreting federal laws in court cases
- B. Commanding the armed forces as president
- C. Administering executive departments
- D. Making federal laws

98. A state government sets requirements for public-school graduation while the federal government controls naturalization. Which principle is illustrated?

- A. Federalism
- B. Direct democracy only
- C. Judicial review
- D. Monopoly

99. Why are checks and balances included in the U.S. constitutional system?

- A. To make all three branches perform exactly the same duties
- B. To allow each branch to limit certain actions of the others
- C. To eliminate disagreement among public officials
- D. To give state governments control over every federal decision

100. A local government wants to decide where new public parks and fire stations should be built. Which geographic tool would be most useful for comparing population distribution with existing service locations?

- A. A thematic map using population and facility data
- B. A timeline of national elections
- C. A dictionary of political terms
- D. A family tree

101. When the price of a product rises and consumers buy less of it, with other factors unchanged, which economic relationship is illustrated?

- A. A trade surplus
- B. Specialization
- C. The law of demand
- D. Barter

102. A farmer chooses to grow apples instead of pumpkins on a limited field. The profit the farmer could have earned from pumpkins is an example of what?

- A. Inflation
- B. Opportunity cost
- C. Tariff
- D. Public good

103. Which situation is the clearest example of specialization?

- A. Every worker performs every bakery task from beginning to end each day.
- B. The bakery stops producing bread and permanently closes its operation.
- C. A bakery assigns one worker to mix dough, another to shape loaves, and another to manage the ovens.
- D. Customers exchange handwritten notes instead of using money for purchases.

104. A historian compares letters from factory workers, newspaper editorials, and company records about the same labor dispute. Why is using multiple sources valuable?

- A. One source will automatically cancel out every other source.
- B. All sources from the same period must contain identical viewpoints.
- C. Using more sources eliminates the need to consider bias or purpose.
- D. The sources can reveal different perspectives and allow claims to be corroborated.

105. Which feature most directly distinguishes a democracy from an absolute monarchy?

- A. Political authority is accountable to citizens through institutions such as elections and law.
- B. One hereditary ruler holds unrestricted governing authority.
- C. Citizens have no recognized political role.
- D. All public decisions are made by a royal family.

106. A city grows where a navigable river meets a major overland route. Which geographic concept best explains why the location can promote growth?

- A. Latitude alone determines all economic activity.
- B. Relative location can increase transportation and trade connections.
- C. Physical geography never influences settlement.
- D. Cities can grow only where no routes intersect.

107. A family moves from a rural area to a city because jobs are more plentiful there. In migration analysis, the availability of jobs is best described as what?

- A. A line of longitude
- B. A tariff
- C. A judicial precedent
- D. A pull factor

108. Why might a historian examine who created a political cartoon and the audience it targeted?

- A. They prove the cartoon contains no bias.
- B. They make the date of publication irrelevant.
- C. Authorship and audience help reveal the source's purpose and perspective.
- D. They turn the cartoon into a scientific experiment.

109. A classroom mock election uses secret ballots and counts each eligible student's vote equally. Which democratic principle is most directly modeled?

- A. Hereditary succession
- B. Political equality in voting
- C. Rule by military command
- D. Economic monopoly

110. A country can produce either 100 units of wheat or 50 units of cloth with the same resources. Another country can produce either 60 units of wheat or 60 units of cloth. What idea would help determine gains from trade?

- A. Comparative advantage based on opportunity costs
- B. Absolute location on a map
- C. Separation of powers
- D. Population density alone

111. Which action is an example of a citizen participating in local government?

- A. Changing the orbit of a satellite
- B. Setting the interest rate for the entire national economy personally
- C. Issuing a Supreme Court ruling
- D. Speaking during the public-comment period at a city council meeting

112. A community has limited funds and must choose between repairing a playground and expanding a library program. Which concept is most clearly illustrated?

- A. Resources are unlimited whenever needs are important.
- B. Every public decision has zero opportunity cost.
- C. Scarcity requires choices among competing uses of resources.
- D. Scarcity applies only to private businesses.

113. In music, what does a crescendo direct performers to do?

- A. Gradually slow the tempo.
- B. Repeat the entire piece.
- C. Change every note to a higher pitch.
- D. Gradually increase the volume.

114. An art teacher asks students to create the illusion that a road narrows and meets at a distant point in a landscape drawing. Which technique are students using?

- A. Linear perspective
- B. Random texture only
- C. Complementary rhythm
- D. Symmetrical balance only

115. During moderate exercise, which change is a normal response that helps working muscles receive more oxygen?

- A. Heart rate stops completely.
- B. Breathing permanently ceases.
- C. Heart rate and breathing rate increase.
- D. Blood circulation becomes unnecessary.

116. Which practice most directly reduces the risk of foodborne illness when preparing raw chicken?

- A. Use the same unwashed cutting board for salad ingredients.
- B. Wash hands and sanitize surfaces after contact with the raw chicken, and cook it thoroughly.
- C. Leave raw chicken at room temperature for several hours.
- D. Judge safety only by whether the chicken smells normal.

117. A student is deciding whether an online advertisement for a costly supplement is trustworthy. Which action is most appropriate?

- A. Assume customer testimonials prove the product works.
- B. Check the claims against credible health sources and look for evidence rather than relying on testimonials.
- C. Buy the product because the advertisement uses scientific-looking graphics.
- D. Ignore who produced the advertisement or what evidence is cited.

118. A theater teacher asks actors to make a character's nervousness clear without adding dialogue. Which choice best uses nonverbal performance?

- A. Use posture, facial expression, movement, and gesture to communicate tension.
- B. Read stage directions aloud to the audience.
- C. Replace the scene with a written report.
- D. Stand motionless with an intentionally unrelated expression.

119. A student is creating a monthly budget. Which expense is most likely to be a fixed expense?

- A. The amount spent on optional snacks
- B. The cost of an unplanned movie outing
- C. The amount spent on a spontaneous gift
- D. A monthly apartment rent payment

120. A student is preparing for a job interview. Which behavior is most appropriate?

- A. Interrupt each interview question before the interviewer finishes speaking.
- B. Answer each interview question with a joke unrelated to the position.
- C. Arrive prepared, listen carefully, and give specific examples that address the interviewer's questions.
- D. Avoid learning anything about the organization or role before arriving.

Practice Exam 5: Answer Key and Explanations

1. A — The onset /m/ and the rime /ap/ are spoken parts that the child blends to form map. Onset-rime work is a phonological-awareness task because it involves manipulating speech sounds without printed letters. Phoneme deletion removes a sound, syllable counting works with larger units, and alphabet naming concerns print. This is a spoken blending task.

2. D — Reusable can be analyzed into meaningful parts: re- means again, use is the base, and -able means capable of. Recognizing morphemes helps readers infer meanings of unfamiliar derived words. Alphabetical order, rhyme, and punctuation may support other literacy tasks but do not explain how the word's meaningful parts combine. The analysis is meaning based.

3. B — The words lifted, steel, and beam provide semantic clues that make the machine meaning of crane appropriate. Readers resolve multiple-meaning words by integrating vocabulary knowledge with sentence context. Syllable counting, spelling rules, and capitalization can describe features of the word or sentence, but they do not determine which meaning fits.

4. C — The biography organizes events according to time, moving from childhood through later stages of the scientist's life. That pattern is chronological sequence. Compare-and-contrast would emphasize similarities and differences, problem-and-solution would center on a difficulty and response, and cause-and-effect would organize information primarily around reasons and consequences rather than time. Time order is the controlling pattern.

5. D — The narrator uses I and directly reports personal actions and feelings, which identifies first-person narration. Third-person narration uses pronouns such as he, she, or they, while omniscient narration may reveal several characters' thoughts. Second person addresses a reader as you. The pronoun and perspective together make first person the best answer.

6. B — The plot shows that the siblings' progress improves when they listen, share responsibility, and work together, supporting a broad theme about cooperation. A theme extends beyond the literal details of the story. The other choices make unsupported claims about weather, all arguments, or sibling authority and are not developed by the events.

7. C — The survey results support the editorial's position by showing a need connected directly to later library hours. In an argument, evidence should be relevant to the claim and help justify it. The data do not turn the text into a story, introduce an unrelated subject, or function as figurative language.

8. A — Describing the porch as groaning gives a humanlike action to an inanimate structure, making the sentence an example of personification. The comparison using as is a simile, while the statements about material and distance are literal descriptions. Figurative language depends on how words are used, not merely on vivid subject matter.

9. A — Glared suggests an intense, unfriendly look, so the revision changes the emotional association of the verb while preserving the basic action of looking. The tense remains past, dog remains the subject, and the sentence still describes an action. Connotation helps writers shape tone even when denotations are closely related. The revision intensifies the attitude conveyed.

10. C — The first sentence avoids an ambiguous personal pronoun by naming Maya as the speaker, and it has a clear antecedent for it: the folder. The other sentences use pronouns whose referents could reasonably be interpreted in more than one way. Clear pronoun reference supports cohesion and prevents readers from having to guess who or what is meant.

11. B — A primary source comes from a participant, witness, or artifact connected directly to the event being studied. An interview with someone who experienced the blackout provides firsthand testimony. Encyclopedias, textbooks, and later comparative articles synthesize or interpret information after the event, so they function as secondary sources rather than direct evidence.

12. D — Mentioning a study is not enough to establish credibility. A critical reader should locate the original research or a trustworthy report, then examine authorship, methods, evidence, and whether the sweeping claim is justified. Likes and sharing behavior do not establish validity, and accepting an unsupported claim simply because it sounds scientific bypasses source evaluation.

13. D — A complex sentence contains one independent clause and at least one dependent clause. Although the rain stopped cannot stand alone as a complete sentence, while the field remained muddy can. The sentence with and joins two independent clauses and is compound; the remaining examples each contain one independent clause only.

14. A — The idiom all ears means listening very attentively, not literally having or focusing on ears as body parts. The context of a surprise announcement supports that figurative meaning because Luis

would be eager to hear details. Literal interpretations of idioms often sound possible word by word but do not fit conventional usage.

15. C — Historical fiction places invented characters or events within a recognizable past setting and uses researched period details to create plausibility. A biography recounts a real person's life, procedural nonfiction explains how to do something, and science fiction typically explores imagined scientific or technological possibilities. The combination of fiction and a documented historical setting identifies the genre.

16. B — A colon can introduce a list after a complete independent clause. The hikers packed three essentials can stand alone, and the colon appropriately introduces the items that name those essentials. A colon should not separate a subject from its verb, a verb from its object, or two sentence parts that do not form the required introduction.

17. D — The student restates a classmate's idea in new words and asks for confirmation, which is paraphrasing used to check comprehension. This listening behavior supports collaborative discussion because misunderstandings can be clarified before responding. It is not interruption, exact memorization, or a writing-conventions task, all of which serve different purposes from confirming meaning.

18. A — Connecting the printed letter m with the spoken sound /m/ develops the alphabetic principle, the understanding that written letters and letter patterns represent speech sounds. Tracing can reinforce the connection when paired with sound production. Syllable count, picture cues, and punctuation do not explain the systematic relationship between graphemes and phonemes.

19. C — Ship contains three phonemes: /sh/, /i/, and /p/. The letters s and h form one digraph representing the single /sh/ sound, so counting letters would give the wrong result. Using counters makes the spoken segmentation visible and helps students focus on individual phonemes rather than the number of printed characters.

20. D — Thin begins with the digraph th, in which two letters work together to represent one consonant sound. Stop and clap begin with consonant blends, where both consonant sounds remain audible, and mint has no th digraph. Selecting a clear example helps students isolate the targeted spelling-sound relationship during explicit phonics instruction.

21. B — The contrast between hop and hope illustrates a common silent-e pattern: the final e can signal that the preceding vowel represents its long sound. Explicit comparison of word pairs such as hop/hope helps students notice the orthographic pattern. Punctuation, alphabetical order, and character identification do not address the decoding feature causing this error.

22. A — Robot is naturally divided into the spoken syllables ro and bot. Marking the syllable boundary can reduce the decoding load by allowing the student to process smaller pronounceable units and then blend them. The other divisions separate letters in ways that do not match the word's syllable structure and therefore provide less useful decoding support.

23. C — Jumped, jumping, and jumps share the base jump while their endings mark grammatical information such as tense or form. Recognizing stable bases and inflectional morphemes supports decoding, spelling, and vocabulary. The endings do not create unrelated meanings, change the initial phoneme, or function as punctuation; they are meaningful word parts attached to a base.

24. B — Said contains a spelling pattern that is not fully predictable from the most common grapheme sounds, so instruction should identify the parts that are regular and the part that must be learned as unexpected. Mapping sounds to spellings supports secure word memory. Guessing, skipping, or relying on visual shape does not build accurate word recognition.

25. A — Because accuracy is already strong, the primary need is fluency: appropriate rate, phrasing, and expression. Hearing a model and rereading manageable text with feedback can help the student group words into meaningful phrases and develop automaticity. Harder unsupported reading, copying, and noun identification do not directly address oral reading prosody and pace.

26. C — Universal screening uses brief, efficient measures with all students to identify those who may be at risk and may need additional diagnostic assessment or support. A report-card grade, portfolio, or end-of-year test can provide useful information for other purposes, but none serves the same early, systematic risk-identification function for an entire grade.

27. D — Unbelievable contains recognizable parts such as un-, believe, and -able and can also be approached through syllable division. Analyzing manageable chunks supports accurate decoding and meaning. First-letter guessing, skipping long words, or reading only the last syllable removes important orthographic information and encourages approximation rather than systematic word analysis. The strategy preserves all parts of the word.

28. B — The spelling tran suggests the student hears the consonants but has not represented the long /ā/ vowel with the expected ai pattern. Mapping /ā/ to ai across related examples makes the vowel team explicit. Consonant practice, copying without sound analysis, and sorting by length do not target the missing grapheme pattern.

29. D — The prompt directs attention to the consequence of carrying extra water, a semantic clue that supports inferring that arid means very dry. Effective context instruction asks students to connect surrounding information with a tentative word meaning. Letter counting, alphabet order, and copying focus on print features rather than constructing meaning from context.

30. C — A story map makes the major narrative elements visible and gives the student a structure for organizing a complete retell. Because the student already recalls characters, the scaffold should target missing plot relationships such as problem and resolution. Alphabetizing, copying, and unrelated vocabulary practice do not address the identified narrative-comprehension gap.

31. A — The passage does not directly state what happened to recess, so students must combine details such as puddles, an empty playground, and children indoors to infer that outdoor recess was likely canceled or delayed. Asking for supporting details makes the inference accountable to text evidence. The other prompts measure surface features rather than implied meaning.

32. B — Headings, sidebars, and captions are informational-text features that signal organization and highlight key content. Previewing them helps students activate relevant knowledge, establish a purpose, and anticipate ideas they will encounter. The strategy supports rather than replaces reading, and it does not justify ignoring body text or assess handwriting speed. Students then verify predictions while reading.

33. D — Progress-monitoring data are meant to inform instruction. A flat or inadequate growth pattern suggests the current intervention may need greater intensity, different grouping, more explicit practice, or another evidence-based adjustment. Ignoring the data, discontinuing measurement, or withdrawing instruction defeats the purpose of responsive intervention and provides no basis for improving the student's outcomes.

34. C — Orthographic mapping links a word's phonemes with its specific graphemes so the spelling can become stored for rapid retrieval. Mapping /ch/ to ch, /e/ to e, /s/ to s, and /t/ to t uses the student's phonemic analysis to establish the written form. Visual-shape memorization, guessing, and alphabet recitation do not create the same sound-spelling connections.

35. B — Informative writing explains a topic clearly using accurate, relevant information. A focused topic and reliable research provide the content, while related subtopics create an organizational plan for drafting. Decorative choices, premature conclusions, and ungrouped facts do not establish a coherent explanation. Planning should connect the writer's purpose, evidence, and structure before sentence-level polishing.

36. A — A personal narrative becomes clearer and more engaging when events unfold in a purposeful sequence and concrete details help readers experience the situation. Sensory details and a developed resolution strengthen both coherence and elaboration. Definitions, unrelated statistics, and removing time-order language would shift away from the narrative purpose or make the event sequence harder to follow.

37. C — The prompt invites a student to respond to a classmate's interpretation and extend it with additional textual evidence. That practice supports collaborative, evidence-based discussion rather than isolated turn taking. Exact repetition, changing the topic, or unsupported agreement does not advance collective reasoning. Productive discussion requires listening, connecting ideas, and explaining how evidence supports a contribution.

38. D — Avoiding plagiarism requires distinguishing a writer's own wording from borrowed language and ideas. Students should paraphrase genuinely, quote exact wording when needed, and provide appropriate attribution. Minimal word substitution can still copy a source's structure, and factual information does not automatically permit unattributed copying. Recording sources also supports later citation and verification.

39. A — Persuasive writing is stronger when a clear claim is supported by relevant evidence and reasoning. Information about how students use outdoor spaces can help show a need for shade, especially when the writer explains the connection. Unrelated description, removing the claim, or repeating an opinion adds little logical support and can reduce clarity.

40. B — The identified problem is cohesion between paragraphs, so feedback should target transitions and relationships among ideas. Effective transitions can signal sequence, contrast, cause, example, or continuation. Replacing verbs indiscriminately, deleting topic sentences, or adding punctuation does not solve the organizational gap. Revision is most effective when feedback addresses the specific weakness evident in the draft.

41. C — Six boxes contain $6 \times 24 = 144$ markers. After 37 are given away, $144 - 37 = 107$ remain. The operation sequence follows the context: multiplication finds the starting total and subtraction accounts for the markers removed. The other values result from adding, subtracting incorrectly, or using the wrong starting quantity.

42. B — To convert $7/20$ to a decimal, make an equivalent fraction with denominator 100: $7/20 = 35/100 = 0.35$. The other decimals represent different fractions. Connecting fractions to hundredths provides a direct place-value interpretation and makes the equivalence visible rather than relying on a memorized decimal form. This equivalence can also be checked by division.

43. D — In 462,715, the digit 6 is in the ten-thousands place, so its value is $6 \times 10,000 = 60,000$. Place value depends on position, not simply on the digit itself. The distractors correspond to neighboring places or an unrelated hundreds value and therefore do not match the location of the 6.

44. A — Twenty-four beds are three groups of eight beds. Keeping the ratio 3 bags for every 8 beds means multiplying both parts by 3, so $3 \times 3 = 9$ bags are needed. The other choices do not preserve the given ratio. Scaling both quantities by the same factor maintains proportional equivalence.

45. A — A unit rate gives the amount transferred in one minute. Divide the total volume by the elapsed time: $84 \div 7 = 12$ liters per minute. Multiplying or adding the quantities would not produce a per-minute rate. The units also confirm that liters should be divided by minutes to answer the question.

46. D — One quarter of \$80 is \$20, so the promotion reduces the price by \$20. Subtracting that reduction from \$80 gives a customer price of \$60. The \$20 choice is only the amount saved, not the amount paid. The remaining options do not represent a one-quarter reduction from the regular price.

47. C — The ratio of sprouted to planted seeds is 14:21. Dividing both terms by their greatest common factor, 7, gives 2:3. Simplifying a ratio preserves the same multiplicative relationship between its quantities. The other choices change that relationship because they cannot be obtained by dividing both original terms by the same factor.

48. B — The amount per serving is found by dividing the total oats by the number of servings: $2.5 \div 10 = 0.25$ cup per serving. The value 2.5 is the total, not a unit rate. The other values result from reversing or misapplying the division and do not preserve the recipe's proportional relationship.

49. D — Each inch on the plan represents 12 actual feet. Multiply the measured 7.5 inches by 12 feet per inch: $7.5 \times 12 = 90$ feet. The inch units cancel in the scale calculation, leaving feet. Adding or subtracting the quantities would not preserve the constant relationship defined by the drawing scale.

50. C — Thirty-five percent is 0.35, so multiply the total number of boxes by the fraction represented by the percent: $0.35 \times 240 = 84$. A useful check is 30% of 240 equals 72 and 5% equals 12, giving 84

altogether. The other choices reflect incomplete percentage calculations or subtraction. This confirms the portion of the total.

51. B — The club gains 15 students because $65 - 50 = 15$. Percent increase compares that change with the original membership, so $15 \div 50 = 0.30$, or 30%. Fifteen is the number of additional students, not the percentage. Using the new total as the denominator would answer a different comparison.

52. A — The white-paint amount grows from 5 parts to 20 cups, a scale factor of 4. Apply the same factor to the red part: $4 \times 4 = 16$ cups. Equivalent ratios require both quantities to be scaled equally. The other options do not maintain the original 4:5 relationship between red and white paint.

53. B — For temperatures below zero, the warmer value is the number closer to zero. On a number line, -1.2 lies to the right of -1.8, -2.1, and -3.0, so -1.2°C is warmest. Comparing only the absolute digits can reverse the order because greater negative magnitude means a lower temperature. The number-line order gives the comparison directly.

54. C — Rising 35 meters means adding 35 to the starting position: $-120 + 35 = -85$. The submarine remains below sea level because the rise is smaller than 120 meters. Subtracting 35 would move it deeper, while positive 85 would incorrectly cross sea level. Signed numbers represent direction relative to the reference point.

55. D — The greatest number of identical kits must divide both 42 and 56 with no remainder, so the problem asks for their greatest common factor. The common factors include 1, 2, 7, and 14, with 14 greatest. Each kit would then receive 3 red counters and 4 blue counters. This division also verifies that no counters remain.

56. A — The next simultaneous signal occurs at the least common multiple of 8 and 12. Multiples of 8 include 8, 16, and 24, while multiples of 12 include 12 and 24. The first positive common multiple is 24 minutes. A common factor such as 4 does not represent the next shared time interval.

57. A — The decimal 0.625 equals $625/1000$. Dividing numerator and denominator by 125 simplifies the fraction to $5/8$. Checking by division gives $5 \div 8 = 0.625$. The other fractions produce different decimal values, so they would represent different portions of a liter rather than the quantity shown on the container. The fraction and decimal are therefore equivalent.

58. D — The fraction of points earned is $18/24$, which simplifies to $3/4$. Converting $3/4$ to a percent gives $0.75 \times 100 = 75\%$. The denominator represents the total possible points, so dividing in the opposite direction would not model the situation. The other percentages do not equal the earned fraction. This is also equivalent to three quarters.

59. B — Translate the wording as $4 + 3(6 - 2)$. First find the difference inside the grouping: $6 - 2 = 4$. Then multiply $3 \times 4 = 12$ and add the 4 base points to obtain 16. The order follows the structure of the scoring rule and prevents operation-order errors.

60. C — The purchase is modeled by $5x + 7 = 32$. Subtract the \$7 folder cost to get $5x = 25$, then divide by 5 to obtain $x = 5$. Substitution checks the result because five \$5 notebooks plus the \$7 folder total \$32. The other prices do not satisfy the purchase total.

61. C — Area measures the number of square units covering a rectangle, so multiply length by width: $11 \times 7 = 77$ square centimeters. Adding the side lengths would not measure surface coverage, and doubling their product would be unnecessary. The squared unit is important because area is two-dimensional rather than a linear measurement.

62. A — The inside space is the volume of a rectangular prism, found by multiplying the three perpendicular dimensions. Thus $4 \times 3 \times 6 = 72$ cubic centimeters. Adding the dimensions would give only a linear total, while multiplying two dimensions would give area. Cubic units correctly describe three-dimensional capacity. All three dimensions are required for volume.

63. B — Because both points have the same x-coordinate, the segment is vertical. Its length is the absolute difference between the y-coordinates: $|9 - 3| = 6$ units. Adding coordinates or comparing x-values does not measure this vertical distance. Coordinate geometry connects location on the plane with ordinary distance along horizontal or vertical lines.

64. D — The banner's area is one-half times base times perpendicular height. Using the given measurements gives $\frac{1}{2} \times 10 \times 7 = 35$ square meters. Multiplying base and height without halving would give the area of a related rectangle, while adding the measurements would not determine the two-dimensional surface covered. The perpendicular height is the relevant height measure.

65. A — A square has four equal sides, so its perimeter equals four times one side length. Divide 36 by 4 to get 9 inches. Eighteen would represent half the perimeter, while 144 results from multiplication rather than division. The answer is a linear measure because the question asks for a side length.

66. C — To find the mean, add the values and divide by the number of data points. The sum is $3 + 5 + 5 + 7 + 10 = 30$, and $30 \div 5 = 6$. Five is the median and mode, while 30 is the sum. Each statistic describes the data differently.

67. B — The values are already ordered. With five data points, the median is the middle, or third, value, which is 6. The median is not found by averaging all the values unless that happens to give the same result. Eight is another data value, while 35 is the sum and does not represent center.

68. D — There are $5 + 3 + 2 = 10$ marbles total, and 3 favorable outcomes are green. Therefore the probability is $\frac{3}{10}$. The denominator of a simple probability should represent all equally likely outcomes, not only non-green marbles or the number of colors. The fraction directly compares favorable outcomes with the total.

69. D — An obtuse angle measures greater than 90° but less than 180° . Since 125° lies within that interval, the angle is obtuse. An acute angle is less than 90° , a right angle is exactly 90° , and a straight angle is exactly 180° . Classification depends on the angle's measure relative to these benchmarks.

70. B — Angles forming a straight line are supplementary, so their measures sum to 180° . Subtract 68° from 180° to get 112° . The two angles need not be equal, and 22° would come from subtracting 68 from 90 instead. The straight-line relationship determines which total angle measure must be used. Supplementary angles provide a useful geometric check.

71. A — First find the floor area: $12 \times 9 = 108$ square feet. Then multiply by the cost per square foot: $108 \times \$4 = \432 . The calculation uses square footage because carpet covers area. The smaller distractors represent partial calculations that stop after finding perimeter, area, or an incorrect product.

72. C — Slope is change in y divided by change in x . From $(0, 2)$ to $(3, 8)$, the vertical change is $8 - 2 = 6$ and the horizontal change is $3 - 0 = 3$. Thus the slope is $6/3 = 2$. Reversing the ratio or using one change alone gives the distractors.

73. B — Substitute $x = 6$ into the rule: $y = 4(6) - 1 = 24 - 1 = 23$. The expression requires multiplication before subtraction. The other choices can result from subtracting at the wrong step, forgetting the -1 , or adding instead. Substitution checks how an algebraic rule maps an input to an output.

74. A — The interquartile range measures the spread of the middle half of the data and equals $Q3 - Q1$. Here, $15 - 7 = 8$. The minimum, median, and maximum are not used in that subtraction. The distractors represent other differences among the five-number summary rather than the distance between the quartiles.

75. D — The tank starts with 18 gallons, so 18 is the initial value. Each minute adds 5 gallons, represented by $5m$ after m minutes. Combining these gives $18 + 5m$. The other expressions assign the rate and initial amount incorrectly or model a decrease rather than a steady increase from the starting quantity.

76. C — The error shows that students are treating digits independently instead of understanding regrouping and place value. A base-ten model can make exchanging one hundred for tens and one ten for ones visible, then link that reasoning to the algorithm. Memorization, harder problems, or avoiding representations would not repair the underlying conceptual misunderstanding.

77. D — The student's reasoning treats the denominator as if a larger denominator created larger pieces. Using equal wholes can show that eighths are smaller than halves, and equivalent fractions give $1/2 = 4/8$, making $3/8 < 4/8$ visible. The instruction should confront the misconception conceptually rather than reinforce a faulty denominator-only rule.

78. A — Rearranging a parallelogram into a rectangle preserves area while making the base and perpendicular height correspond to a familiar rectangle formula. The transformation gives students a reason for $A = bh$ rather than a rule to memorize. Slanted side length and vertex count do not explain how many square units cover the figure.

79. B — Solving the same problem in more than one way and explaining connections encourages flexible reasoning and mathematical communication. Students may relate equal groups, repeated subtraction, multiplication facts, or other representations. The goal is not to eliminate efficient procedures, but to deepen understanding by comparing how different strategies express the same mathematical relationships.

80. C — Interpreting data requires students to reason from a representation about center, spread, patterns, or comparisons. Asking what is typical and requiring evidence from the graph prompts that

analysis. Marker color, copying numbers, and counting letters may involve classroom tasks, but they do not require students to make or justify a statistical interpretation.

81. C — Plants can change growth direction in response to environmental stimuli such as light. Bending toward a light source is a directional growth response that helps position leaves for light capture. The response does not mean the plant becomes nonliving, gravity disappears, or sound pulls the stem. The observed pattern is a biological response to light.

82. A — Metal is generally a better thermal conductor than wood, so energy from the warmer surroundings moves through the metal to the ice more readily. The materials do not create heat or cold, and wood still contains thermal energy. Identical ice has the same melting point under the same conditions; the difference is the rate of energy transfer.

83. D — Rusting forms new substances through a chemical reaction involving iron, oxygen, and water, so the material's chemical composition changes. Melting changes physical state, cutting changes size and shape, and dissolving disperses sugar particles without creating a new substance. A chemical change is identified by formation of substances with new properties.

84. B — A flashlight needs a correctly arranged electrical circuit so the batteries provide a potential difference that drives current through the bulb. Incorrect battery orientation can prevent the circuit from functioning as designed. The bulb does not become a magnet, batteries do not simply become insulators, and electric devices require a complete conducting path rather than an open circuit.

85. C — The Moon is illuminated on the half facing the Sun, while its position relative to Earth and the Sun changes as it orbits Earth. From Earth, observers therefore see changing fractions of the illuminated half, producing the repeating phase sequence. Earth's shadow is responsible for eclipses, not the ordinary progression of lunar phases.

86. D — Light changes speed and direction when it passes from one transparent medium into another, a process called refraction. Rays from the submerged part of the spoon are bent at the air-water boundary, so the spoon appears displaced. Sound reflection, magnetism, and chemical decomposition do not explain this optical effect at the boundary between media.

87. B — Density is mass divided by volume. When two objects have the same volume, doubling the mass doubles the density. Therefore object X, with twice the mass in the same amount of space, has twice the density of object Y. Equal volume makes the comparison simpler rather than impossible because only mass differs.

88. A — For the same car, increasing the net force produces greater acceleration, assuming other conditions remain comparable. The push changes the car's motion, not its mass, and gravity continues acting. A stronger push also does not transform the environment into a vacuum. The motion change follows the relationship between force, mass, and acceleration.

89. B — Grass is a producer because it captures energy and makes organic matter through photosynthesis rather than obtaining energy by eating other organisms. Rabbits that eat plants are

primary consumers, hawks that eat rabbits are higher-level consumers, and decomposers break down dead material. Food-web roles depend on how organisms obtain energy.

90. A — Large algal blooms can be followed by extensive decomposition. Microorganisms that decompose dead algae use oxygen during cellular processes, which can lower dissolved oxygen to levels stressful or lethal for fish. Decomposition does not create unlimited oxygen, fish do not become photosynthetic, and microorganisms remain present as important participants in the process.

91. C — Transpiration is the release of water vapor from plants, especially through openings in leaves. It contributes water to the atmosphere as part of the water cycle. Condensation changes vapor to liquid, precipitation returns water from the atmosphere to Earth's surface, and freezing changes liquid water to solid. The direction and state change distinguish the processes.

92. D — Stress can build in rocks near a fault until movement occurs suddenly, releasing stored elastic energy as seismic waves. Those waves travel through Earth and produce ground shaking. Solar heating, cloud condensation, and transpiration are real Earth-system processes, but they do not provide the direct mechanical energy released during an earthquake.

93. D — Fertilizer amount is the independent variable, so it must differ among groups. Plant height is the dependent variable that will be measured. Other conditions that could affect growth, such as light, water, soil, and plant type, should be controlled. Keeping them consistent makes differences in growth more reasonably attributable to fertilizer amount.

94. A — Repeated trials provide more data and help show whether a result is consistent or was strongly affected by random variation or measurement error. They do not guarantee identical outcomes, eliminate measurement, or automatically change the variable being tested. Engineering comparisons are stronger when decisions are based on reproducible patterns rather than one trial.

95. B — Renewable resources are replenished by ongoing natural processes on humanly useful time scales, as with sunlight, wind, or flowing water. Renewable does not mean impact-free, underground, or dependent on fossil-fuel combustion. The key distinction is the rate and process of replenishment relative to human use, not whether the resource has zero consequences.

96. C — A simple physical filter can trap some particles based on size, but dissolved chemicals and many microorganisms can pass through or require other treatment. Therefore clearer-looking water is not automatically safe water. The other choices overstate what filtration can do or describe impossible outcomes. Models are useful when their capabilities and limitations are recognized.

97. D — Debating, amending, and voting on a bill are parts of the federal lawmaking process, a primary function of Congress in the legislative branch. Federal courts interpret laws in cases, while the president leads the executive branch and administers federal law. The scenario therefore illustrates legislative responsibility rather than executive or judicial authority.

98. A — Federalism divides governmental authority between the national government and state governments. Education policy has substantial state responsibility, while naturalization is a federal power. Direct democracy concerns citizens voting directly on policy, judicial review concerns courts

evaluating constitutionality, and monopoly is an economic concept. The scenario emphasizes different governmental levels exercising different powers.

99. B — Checks and balances give branches specific ways to limit or respond to one another, reducing the risk that one branch will exercise unchecked power. The branches retain distinct functions rather than identical duties, and the system does not eliminate political disagreement. It also differs from federalism, which concerns the division of authority between national and state governments.

100. A — A thematic map can display selected spatial data, such as population density and the locations of existing facilities, making geographic patterns and service gaps easier to compare. A timeline organizes events by time, a dictionary defines terms, and a family tree shows relationships among people. The planning question is fundamentally spatial, so mapped data are most useful.

101. C — The law of demand describes the general inverse relationship between a good's price and the quantity consumers are willing and able to buy, assuming other relevant factors remain unchanged. A trade surplus compares exports and imports, specialization concerns focusing production, and barter exchanges goods without money. The scenario directly links a higher price with lower quantity demanded.

102. B — Opportunity cost is the value of the next best alternative given up when a choice is made. Because the field cannot simultaneously be used for both crops in the same way, choosing apples means forgoing the potential benefit from pumpkins. Inflation, tariffs, and public goods describe different economic concepts unrelated to this tradeoff between alternatives.

103. C — Specialization occurs when people, businesses, or regions focus on particular tasks or products, often increasing efficiency through skill and division of labor. Assigning workers different stages of bread production is a direct example. Having everyone perform all tasks reduces specialization, while closing a bakery or changing the medium of exchange does not illustrate division of labor.

104. D — Different sources may record different experiences, purposes, and perspectives. Comparing them allows a historian to identify agreements, contradictions, and omissions and to corroborate claims rather than relying on one account. Multiple sources do not eliminate bias or guarantee agreement; instead, they make source evaluation and contextual reasoning more informative and more necessary.

105. A — In a democracy, political authority is derived from and accountable to the people through institutions such as elections, representation, constitutional rules, and protected participation. An absolute monarchy concentrates governing authority in a hereditary ruler. The distractors describe features more characteristic of absolute rule, making accountability to citizens the central distinction in the question.

106. B — A place located at the intersection of transportation routes can become a hub for movement, exchange, and services. That advantage is explained by relative location: how a place is situated in relation to other places and networks. Latitude alone cannot determine economic activity, and physical and transportation geography can strongly influence settlement patterns.

107. D — A pull factor is a condition that attracts people to a destination, such as employment opportunities, safety, education, or family connections. In this scenario, jobs make the city more attractive. Longitude identifies geographic position, a tariff is a tax on trade, and judicial precedent concerns legal decisions. Those concepts do not explain the migration motive.

108. C — Political cartoons are created for particular purposes and audiences and often express a viewpoint through selection, exaggeration, or symbolism. Knowing the creator and intended audience helps historians interpret those choices and evaluate perspective. That information does not prove neutrality, erase the importance of historical context, or change the source into a scientific investigation.

109. B — Counting each eligible voter's ballot equally models political equality: each participant has the same formal voting weight in choosing among options or candidates. Secret ballots also protect individual choice. Hereditary succession, military rule, and monopoly describe very different political or economic arrangements and do not reflect equal participation in an election.

110. A — Comparative advantage compares opportunity costs, not merely total output. Each country should consider how much of one product it gives up to produce the other. Specializing where opportunity cost is lower can create gains from trade even when one country has higher output in some activities. Location, government structure, and population density do not answer this production-choice question.

111. D — Attending a city council meeting and speaking during public comment is a direct form of civic participation in local government. Individual citizens do not personally control national monetary policy, alter satellite orbits as a civic role, or issue Supreme Court decisions. Participation can include voting, contacting officials, attending meetings, and contributing to public deliberation.

112. C — Scarcity means available resources are limited relative to possible wants and uses, so choices are unavoidable. Funding one project can reduce what is available for another, creating an opportunity cost. Public institutions as well as households and businesses face scarcity. Importance does not make resources unlimited, and public decisions can involve real tradeoffs among valued goals.

113. D — A crescendo is a dynamic marking that directs performers to become gradually louder over a passage. It concerns volume, not tempo, repetition, or automatic pitch changes. Musical notation separates different dimensions of performance, so identifying whether a marking affects dynamics, rhythm, tempo, articulation, or pitch is essential to interpreting a score accurately.

114. A — Linear perspective creates an illusion of depth by making parallel edges appear to converge toward one or more vanishing points. A road narrowing into the distance is a classic application. Texture and balance are important visual elements and principles, but they do not by themselves explain the geometric recession described in the drawing task.

115. C — During exercise, muscles require more oxygen and produce more carbon dioxide, so the cardiovascular and respiratory systems respond by increasing heart rate and ventilation. Those changes help move gases and nutrients more rapidly. A stopped heart or breathing would be a medical emergency, and circulation remains essential rather than becoming unnecessary during physical activity.

116. B — Raw poultry can carry harmful microorganisms, so safe preparation includes preventing cross-contamination, cleaning hands and surfaces, and cooking the meat to a safe internal temperature. Reusing contaminated surfaces, leaving food unrefrigerated, or relying on smell can allow pathogens to remain or multiply. Food safety depends on handling practices, not appearance or odor alone.

117. B — Health decisions should be based on credible evidence and trustworthy sources, not persuasive design or personal testimonials alone. Checking claims against reliable public-health or medical information helps distinguish supported benefits from marketing. Scientific-looking graphics do not establish validity, and ignoring the source or evidence makes it harder to detect exaggeration, conflict of interest, or unsupported claims.

118. A — Actors communicate meaning not only through dialogue but also through body position, facial expression, gesture, pace, and movement. Coordinating those choices can make nervousness visible to an audience even in silence. Reading stage directions or replacing the scene with prose changes the performance mode, while an unrelated expression would work against the intended characterization.

119. D — A fixed expense is generally predictable and recurs at a set or relatively stable amount over a period, making monthly rent a typical example. Optional snacks, movies, and spontaneous gifts can vary widely or may not occur at all. Distinguishing fixed from variable expenses helps a person plan for required costs before discretionary spending.

120. C — Effective interviewing involves preparation, attentive listening, professional communication, and relevant examples that show skills or experiences. Interrupting, giving unrelated answers, and avoiding basic research can make it difficult to demonstrate fit or interest. The purpose is to communicate clearly about qualifications while also learning enough to respond thoughtfully to the employer's questions.