

PRACTICE EXAM 8: 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 student says that the word crust has five separate speech sounds: /k/ /r/ /u/ /s/ /t/. Which phonological-awareness skill is the student demonstrating?

- A. Syllable blending
- B. Rhyming-word production
- C. Print-concept awareness
- D. Phoneme segmentation

2. Which spelling feature in the word city explains the pronunciation of the initial consonant as /s/?

- A. The word ends with an open syllable.
- B. The letter c before i commonly represents /s/.
- C. The final y always changes the first consonant.
- D. The letters ci form a vowel team.

3. A student explains that the prefix pre- in preview means 'before.' What type of word knowledge is the student using?

- A. Knowledge of derivational morphology
- B. Knowledge of alphabetical sequencing
- C. Knowledge of sentence punctuation
- D. Knowledge of syllable stress only

4. An article first describes a town's overflowing trash bins and then explains how a composting program reduced the amount of waste sent to the landfill. Which text structure is most prominent?

- A. Chronological biography
- B. Compare and contrast
- C. Problem and solution
- D. Definition and example only

5. A writer wants to combine these ideas by making the first idea dependent: 'The rain stopped. The field remained muddy.' Which revision does this correctly?

- A. The rain stopped, and the field remained muddy.
- B. The rain stopped; the field remained muddy.
- C. The rain stopped. The field remained muddy.
- D. Although the rain stopped, the field remained muddy.

6. In the sentence 'When Lena returned the library book to Sofia, she thanked her,' what is the main grammatical problem?

- A. The sentence lacks a verb.
- B. The pronoun references are ambiguous.
- C. The sentence contains a misplaced apostrophe.
- D. The sentence uses an incorrect verb tense.

7. In the sentence 'The old floorboards groaned when we crossed the hallway,' which literary device is used?

- A. Allusion
- B. Hyperbole
- C. Personification
- D. Onomatopoeia only

8. A paragraph explains that rooftop gardens cool buildings, absorb some rainwater, and provide habitat for insects. Which statement best expresses the paragraph's main idea?

- A. Rooftop gardens can provide several environmental benefits.
- B. Most insects can live only on city rooftops.
- C. Rainwater should never reach street drains.
- D. Buildings are cooler only when roofs are painted.

9. A sentence reads, 'The arboretum, a garden devoted to trees, opened a new walking trail.' Which context clue most directly reveals the meaning of arboretum?

- A. The appositive phrase that defines it
- B. The position of the word near the sentence beginning
- C. The past-tense verb opened
- D. The phrase new walking trail

10. A reader wants to find every page in a nonfiction book that discusses erosion. Which text feature would be most efficient?

- A. A caption
- B. A chapter title
- C. An index
- D. A dedication

11. A story is narrated by a character who uses I and describes only what that character sees, thinks, and feels. Which point of view is used?

- A. Third-person omniscient
- B. Third-person objective
- C. Second person
- D. First person

12. A passage states that Kai checked the dark clouds, zipped his jacket, and moved the picnic basket under a shelter. Which inference is best supported?

- A. Kai dislikes eating outdoors.
- B. Kai expects rain soon.
- C. Kai forgot where the basket belonged.
- D. Kai plans to leave the park immediately.

13. The word reusable contains the base use plus the affixes re- and -able. Which meaning is best supported by this structure?

- A. Used only once
- B. Used very quickly
- C. Unable to be used
- D. Able to be used again

14. Which sentence follows standard subject-verb agreement?

- A. The basket of apples were on the counter.
- B. The basket of apples was on the counter.
- C. The basket of apples have been on the counter.
- D. The basket of apples are on the counter.

15. A traditional story features talking animals, a brief plot, and a lesson about honesty at the end. Which genre is most likely?

- A. Historical fiction
- B. Biography
- C. Fable
- D. Science fiction

16. Which transition best signals a contrast between two ideas?

- A. However
- B. For example
- C. Therefore
- D. Similarly

17. During a discussion, a student says, 'So you are arguing that the new rule saves time, even though it costs more at first.' What listening skill is the student demonstrating?

- A. Changing the topic
- B. Paraphrasing another speaker's idea
- C. Reading aloud with expression
- D. Identifying a printed heading

18. A first-grade student can segment the initial and final phonemes in short words but often misses the middle vowel sound. Which activity most directly targets this need?

- A. Sorting books by genre
- B. Practicing alphabetical order
- C. Stretching CVC words and identifying the medial phoneme
- D. Copying sentences with correct capitalization

19. A teacher is introducing the short-a sound to beginning readers. Which activity provides the most direct initial practice?

- A. Have students connect a to /a/ in words such as map, sat, and jam.
- B. Ask students to memorize the spellings of several multisyllabic words.
- C. Have students identify themes in a read-aloud.
- D. Ask students to compare two informational articles.

20. Students have learned common consonant sounds and the vowel team ai. Which text would be best for immediate decoding practice?

- A. A poem filled with unexplained irregular spellings
- B. A chapter that relies mostly on pictures for meaning
- C. A passage containing many unintroduced vowel teams
- D. A decodable passage with words such as rain, sail, and wait

21. A student knows individual letter sounds but reads the word ship as separate sounds without combining them. Which teacher prompt is most appropriate?

- A. Name the punctuation mark after the word.
- B. Say the sounds continuously, then sweep them together to read the word.
- C. Look only at the picture and guess the word.
- D. Skip the word and return after finishing the page.

22. A class is learning the high-frequency word said, whose spelling is not fully predictable from the phonics patterns students know. Which routine best supports orthographic mapping?

- A. Have students copy the word twenty times without saying it.
- B. Ask students to infer the word from a picture each time.
- C. Delay teaching the word until every spelling pattern is regular.
- D. Map the phonemes to the letters and explicitly mark the unexpected spelling.

23. Which word is a clear example of a closed syllable?

- A. Napkin, in the first syllable nap
- B. Pilot, in the first syllable pi
- C. Music, in the first syllable mu
- D. Tiger, in the first syllable ti

24. A student is decoding the unfamiliar word fantastic. Which strategy most appropriately uses syllable knowledge?

- A. Guess the word from the first letter only.
- B. Treat the entire word as one indivisible unit.
- C. Divide it into manageable syllables and blend the parts.
- D. Replace it with a familiar word that begins similarly.

25. A student reads accurately but very slowly and word by word. Which instructional practice is most likely to improve automaticity?

- A. Repeated oral reading of an appropriately challenging passage with feedback
- B. Independent silent reading of a much harder passage without support
- C. Memorizing isolated dictionary definitions
- D. Copying the passage several times by hand

26. A teacher wants students to hear how punctuation and meaning shape expressive reading. Which practice is most appropriate?

- A. Have students count every letter in the passage.
- B. Model fluent reading with phrasing, pauses, and intonation, then discuss the choices.
- C. Ask students to read as fast as possible without pausing.
- D. Remove all punctuation before students read.

27. A fourth-grade student encounters the word disagreement. Which analysis best supports decoding and meaning?

- A. Treat the word as an unanalyzed sight word.
- B. Look only for a rhyme with another word.
- C. Use the final punctuation mark to infer meaning.
- D. Identify dis-, agree, and -ment and combine their meanings.

28. Students are learning why the final consonant doubles in running but not in raining. Which explanation is most accurate for these examples?

- A. All words ending in n must double the final consonant.
- B. Any word with two vowels doubles before a suffix.
- C. Run has a short vowel followed by one final consonant, so n doubles before -ing.
- D. Rain doubles a hidden consonant that is not written.

29. Before students read a science article about migration, a teacher wants to deepen understanding of related vocabulary. Which activity is most effective?

- A. Have students alphabetize unrelated words.
- B. Create a semantic map linking migrate, route, season, habitat, and resources.
- C. Ask students to copy the article title repeatedly.
- D. Practice identifying end punctuation in every sentence.

30. A multilingual learner understands a classroom concept but lacks some of the English words needed to discuss it. Which teacher support is most appropriate?

- A. Use visuals, gestures, real objects, and explicit oral-language modeling.
- B. Require silent independent work until the vocabulary develops naturally.
- C. Correct every accent difference before discussing the concept.
- D. Avoid using the student's background knowledge during instruction.

31. After reading a narrative, a second-grade student remembers isolated details but cannot explain the sequence of major events. Which activity best addresses the difficulty?

- A. Sorting words by number of letters
- B. Practicing handwriting speed
- C. Memorizing the author's biography
- D. Using beginning-middle-end cards to retell the story in order

32. A teacher wants to model how proficient readers make inferences. Which think-aloud is best?

- A. I will count the number of sentences on this page.
- B. I will copy the paragraph exactly as it appears.
- C. The character keeps checking the clock, so I think she is worried about being late.
- D. I will skip every sentence that contains an unfamiliar word.

33. Students are reading two short articles about bats and birds. Which signal words would most strongly cue a compare-and-contrast structure?

- A. Similarly, unlike, both, whereas
- B. First, next, finally, afterward
- C. Because, therefore, as a result, since
- D. Problem, solution, answer, resolve

34. A student realizes that a paragraph no longer makes sense after an unfamiliar sentence. Which response best demonstrates comprehension monitoring?

- A. Continue reading without noticing the confusion.
- B. Stop, reread the sentence, and use surrounding context to repair understanding.
- C. Replace the sentence with a guess unrelated to the text.
- D. Count the words in the paragraph.

35. Students are preparing to write explanatory paragraphs about a local ecosystem. Which activity belongs most clearly in the planning stage?

- A. Correcting commas in the final draft
- B. Publishing the paragraph on a class website
- C. Organizing researched facts into categories before drafting
- D. Replacing weak verbs after a complete draft is written

36. A student revises a narrative by adding a scene that shows why the main character changes her mind. What aspect of writing is the student primarily improving?

- A. Letter formation
- B. Spelling of high-frequency words
- C. Bibliographic formatting
- D. Development and coherence of ideas

37. Students are researching whether a proposed park should include a dog area. Which source is likely to be most credible for current local rules?

- A. An anonymous social-media comment
- B. The municipality's official parks-department website
- C. An undated personal blog with no sources
- D. A fictional story set in a park

38. During a literature discussion, which teacher prompt best promotes accountable talk?

- A. What evidence from the story supports or challenges your classmate's interpretation?
- B. Who can give the shortest possible answer?
- C. Can everyone copy the same response into a notebook?
- D. Which answer will end the discussion fastest?

39. A cereal advertisement shows an athlete next to the product and claims, 'Champions start every day with this bowl.' Which media-literacy question is most important?

- A. How many letters are in the slogan?
- B. What color is the athlete's shoelace?
- C. Does the bowl contain exactly the same number of pieces each time?
- D. How is the advertisement using the athlete's image to persuade the audience?

40. A poem describes 'silver rain stitching the dark pond with tiny circles.' Which element is most prominent?

- A. A formal argument
- B. A chronological list of dates
- C. Imagery created through figurative language
- D. A technical definition

41. Which decimal is greatest?

- A. 4.805
- B. 4.085
- C. 4.58
- D. 4.508

42. A music teacher has 48 rhythm cards and 60 melody cards. She wants to make identical packets using all cards, with no leftovers. What is the greatest number of packets she can make?

- A. 6
- B. 8
- C. 12
- D. 15

43. A recipe uses $\frac{3}{4}$ cup of oats per batch. How many batches can be made with $4\frac{1}{2}$ cups of oats?

- A. 4
- B. 5
- C. 5.5
- D. 6

44. A club mixes red and blue beads in a ratio of 3 red beads to 5 blue beads. If 24 red beads are used, how many blue beads are needed?

- A. 30
- B. 40
- C. 45
- D. 50

45. A digital recorder creates a 31.5-megabyte file from 2.25 minutes of audio at a constant data rate. How many megabytes are added per minute?

- A. 12 megabytes per minute
- B. 13 megabytes per minute
- C. 15 megabytes per minute
- D. 14 megabytes per minute

46. Thirty-five percent of 240 students chose the morning session. How many students chose that session?

- A. 84
- B. 72
- C. 96
- D. 108

47. Which equation represents a proportional relationship in which y is always 2.5 times x ?

- A. $y = x + 2.5$
- B. $y = 2.5 + x/2$
- C. $y = 2.5x$
- D. $y = x - 2.5$

48. Which list orders the numbers from least to greatest?

- A. -1.2, -1.5, 0.4, $3/4$
- B. -1.5, -1.2, 0.4, $3/4$
- C. 0.4, $3/4$, -1.5, -1.2
- D. -1.5, 0.4, -1.2, $3/4$

49. The temperature changed from -6°C in the morning to 5°C in the afternoon. What was the magnitude of the change?

- A. 1°C
- B. 11°C
- C. -11°C
- D. 30°C

50. A library display includes 16 featured titles, and 7 of them are audiobooks. What decimal represents the portion that are audiobooks?

- A. 0.4375
- B. 0.716
- C. 0.56
- D. 0.625

51. A museum's weekend attendance increased from 800 visitors to 920 visitors. What was the percent increase?

- A. 12%
- B. 14%
- C. 18%
- D. 15%

52. A trail map uses a scale of 2.5 centimeters for every 6 kilometers. A route measures 8.75 centimeters on the map. What is the route's actual length?

- A. 14 km
- B. 18 km
- C. 21 km
- D. 24 km

53. A $5\frac{1}{4}$ -meter roll of ribbon is cut into pieces that are each $\frac{3}{8}$ meter long. How many complete pieces can be cut?

- A. 12
- B. 13
- C. 15
- D. 14

54. A train moves at a constant speed of 72 kilometers per hour for 2.5 hours. How far does it travel?

- A. 144 km
- B. 160 km
- C. 180 km
- D. 190 km

55. An elevator begins on level -7, rises 12 levels, and then descends 5 levels. On which level does it stop?

- A. -10
- B. 0
- C. 5
- D. 10

56. A two-stage digital lock offers 2^4 possible first-stage codes and 2^3 possible second-stage codes. If any first-stage code can pair with any second-stage code, how many complete code pairs are possible?

- A. 128
- B. 64
- C. 32
- D. 14

57. Which number is written correctly in scientific notation for 0.00056?

- A. 5.6×10^{-4}
- B. 56×10^{-5}
- C. 0.56×10^{-3}
- D. 5.6×10^4

58. A geometry class records four exact lengths. Which length cannot be expressed as a ratio of two integers?

- A. 0.125 meters
- B. $\frac{7}{9}$ meter
- C. $\sqrt{50}$ meters
- D. 2.75 meters

59. A machine assigns a score using $S = 3n^2 - 2n + 1$. What score is produced when $n = -2$?

- A. 5
- B. 9
- C. 13
- D. 17

60. Four identical art kits plus a \$9 delivery charge cost \$37 altogether. What is the price of one art kit?

- A. \$5
- B. \$7
- C. \$9
- D. \$21

61. A van can carry fewer than 19 people. Three seats are already occupied by adults, and each student group has 4 students. Which number of student groups can ride without reaching the limit?

- A. 5 groups
- B. 3 groups
- C. 4 groups
- D. 6 groups

62. A pattern begins 6, 11, 16, 21, ... Which expression gives the n th term when $n = 1$ corresponds to 6?

- A. $5n + 1$
- B. $6n - 1$
- C. $5n + 6$
- D. $n + 5$

63. A rectangular patio is 12 meters long and 7 meters wide. A 3-meter by 2-meter flower bed occupies part of the patio. What area of the patio remains outside the flower bed?

- A. 72 m^2
- B. 76 m^2
- C. 78 m^2
- D. 84 m^2

64. An aquarium has a rectangular base with area 40 square centimeters and a height of 6 centimeters. What is the aquarium's volume?

- A. 46 cm^3
- B. 120 cm^3
- C. 200 cm^3
- D. 240 cm^3

65. At an intersection, two adjacent angles lie along the same straight curb. One of the angles is 128° . What must the adjacent angle measure?

- A. 38°
- B. 42°
- C. 52°
- D. 62°

66. A game token is plotted at $(2, -3)$. The board is mirrored across the vertical axis $x = 0$. Where does the token appear in the mirror image?

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

67. The numbers of pages read by five students are 12, 15, 15, 18, and 25. What is the median?

- A. 15
- B. 17
- C. 18
- D. 25

68. A spinner is divided into 12 equal sectors. Three sectors are green, four are yellow, and five are purple. What is the probability that one spin lands on green?

- A. $\frac{1}{5}$
- B. $\frac{3}{8}$
- C. $\frac{1}{3}$
- D. $\frac{1}{4}$

69. For the ordered data set 3, 5, 6, 8, 11, 13, 14, 20, what is the interquartile range using the median-of-halves method?

- A. 8
- B. 6
- C. 9
- D. 11

70. A hiking trail is 3.6 kilometers long. How many meters long is the trail?

- A. 360 m
- B. 3600 m
- C. 36,000 m
- D. 3.6 m

71. A rectangle has perimeter 54 centimeters and length 16 centimeters. What is its width?

- A. 5 cm
- B. 8 cm
- C. 13 cm
- D. 11 cm

72. Using 3.14 for pi, what is the circumference of a circle with diameter 10 centimeters?

- A. 15.7 cm
- B. 20 cm
- C. 31.4 cm
- D. 78.5 cm

73. A table shows x-values 0, 1, 2, 3 and corresponding y-values 4, 7, 10, 13. Which equation describes the relationship?

- A. $y = x + 4$
- B. $y = 4x + 3$
- C. $y = 3x + 4$
- D. $y = 3x + 1$

74. A cube has side length 4 centimeters. What is its total surface area?

- A. 96 cm^2
- B. 64 cm^2
- C. 48 cm^2
- D. 16 cm^2

75. The five-number summary of a data set is minimum 12, Q1 18, median 24, Q3 31, maximum 40. What is the range?

- A. 13
- B. 19
- C. 22
- D. 28

76. A third-grade student writes 4,306 as 4,36 and says the zero is unnecessary. Which teacher response best addresses the misconception?

- A. Ask the student to memorize the numeral without discussion.
- B. Use a place-value chart to show that zero holds the tens place.
- C. Move immediately to multiplication facts.
- D. Tell the student only that the answer is wrong.

77. A student orders unit fractions by saying that the fraction with the larger denominator is always larger. Which instructional representation would most directly expose the error?

- A. A multiplication-fact chart
- B. A list of prime and composite numbers
- C. A calendar showing month lengths
- D. Two equal-length paper strips partitioned into sixths and eighths

78. After teaching equivalent ratios, a teacher wants a quick formative assessment. Which task provides the clearest evidence of student reasoning?

- A. Ask students to complete a ratio table and explain the multiplicative pattern.
- B. Ask students to copy a completed table from the board.
- C. Give only a vocabulary definition to memorize.
- D. Assign an unrelated worksheet on angle names.

79. Students are classifying quadrilaterals. Which teacher question best promotes hierarchical understanding?

- A. Can you name only shapes that have no parallel sides?
- B. Which shape has the longest name?
- C. Why can a square also be classified as a rectangle and a rhombus?
- D. How quickly can you draw four unrelated polygons?

80. A class creates a line plot of plant heights measured to the nearest half centimeter. What is the best next instructional move?

- A. Erase the measurements and discuss only the title.
- B. Ask students to use the plot to compare clusters, gaps, and typical values.
- C. Replace the plot with an unrelated spelling list.
- D. Have students memorize the order of classmates' names.

81. Which structure in a typical plant cell carries out photosynthesis?

- A. Nucleus
- B. Cell membrane
- C. Vacuole
- D. Chloroplast

82. In a forest food web, fungi break down dead leaves and fallen branches. What ecological role do the fungi perform?

- A. Primary consumer
- B. Producer
- C. Decomposer
- D. Top predator

83. A desert fox has large ears that help release body heat. This trait is best described as which type of feature?

- A. An adaptation that can improve survival in a hot environment
- B. A learned behavior acquired only after birth
- C. A temporary weather change
- D. A nonbiological property of soil

84. Water droplets form on the outside of a cold glass on a humid day. Which change of state is occurring?

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

85. A student pushes identical blocks across sandpaper and smooth plastic using the same force. The block moves less easily on sandpaper. Which concept best explains the difference?

- A. Greater friction acts between the block and sandpaper.
- B. Gravity is absent on the plastic surface.
- C. The block loses all mass on sandpaper.
- D. Magnetism increases whenever a surface is rough.

86. When a battery-powered flashlight is switched on, which energy transformation occurs most directly?

- A. Light energy becomes chemical energy only.
- B. Nuclear energy becomes gravitational energy.
- C. Chemical energy becomes electrical energy, then light.
- D. Sound energy becomes stored elastic energy.

87. Which simple machine can change the direction of an applied force when a rope passes over a fixed wheel?

- A. Wedge
- B. Pulley
- C. Screw
- D. Inclined plane

88. A bulb, battery, and wires are connected in a circuit, but there is a gap between two wire ends. Why does the bulb remain off?

- A. The bulb can light only in daylight.
- B. A battery produces no electrical potential.
- C. Current flows more strongly through open gaps.
- D. The open gap prevents a complete path for electric current.

89. After heavy rain, some water soaks from the ground surface into soil. What process is this?

- A. Evaporation
- B. Infiltration
- C. Condensation
- D. Transpiration

90. Which process most directly forms sedimentary rock from loose sediments?

- A. Melting and cooling
- B. Complete vaporization
- C. Compaction and cementation
- D. Nuclear fusion

91. A cold, dense air mass advances and forces warmer air rapidly upward. Which weather event is most likely along the boundary?

- A. Several weeks of identical clear weather
- B. A permanent end to evaporation
- C. No change in cloud formation
- D. Clouds and possible storms along a cold front

92. Why does New York experience seasons during the year?

- A. Earth's tilted axis changes the angle and duration of sunlight as Earth orbits the Sun.
- B. Earth moves much closer to the Sun every summer.
- C. The Moon blocks more sunlight during winter.
- D. Ocean tides change the length of the year.

93. The Moon appears bright in the night sky primarily because it does what?

- A. Reflects sunlight
- B. Produces light by nuclear fusion
- C. Stores daylight and releases it after sunset
- D. Glows because of Earth's magnetic field

94. A pond can support about 200 adult frogs under typical conditions. If the population rises far above that level for a long period, what is most likely?

- A. Resources become unlimited.
- B. Every frog reproduces at the same rate forever.
- C. Predators permanently disappear.
- D. Competition for limited resources increases.

95. Which trait is most clearly inherited genetically rather than learned through experience?

- A. Ability to play a piano scale
- B. Natural eye color
- C. Knowledge of a bicycle route
- D. Skill at tying a knot

96. Students test how ramp height affects the distance a toy car rolls. Which setup best makes ramp height the independent variable?

- A. Change both ramp height and car mass each trial.
- B. Use a different floor surface for every height.
- C. Change ramp height while keeping the car, release point, and surface consistent.
- D. Measure only one trial and change no conditions.

97. A historian studying daily life during a 1910 factory strike wants a primary source. Which source would be most useful?

- A. A textbook chapter written in 2020
- B. A diary written by a factory worker during the strike
- C. A recent documentary summarizing several strikes
- D. An encyclopedia article about industrialization

98. A map legend states that 1 inch represents 50 miles. Two towns are 3 inches apart on the map. Which conclusion is correct?

- A. The towns are 53 miles apart.
- B. The towns are 100 miles apart.
- C. The towns are about 150 miles apart.
- D. The towns are 300 miles apart.

99. A town can afford either a new playground or repairs to the public pool this year, but not both. If it chooses the playground, what is the opportunity cost?

- A. The pool repairs that must be forgone
- B. The price of every playground in the state
- C. All future town tax revenue
- D. The number of children who use the playground

100. If demand for concert tickets rises sharply while the number of tickets available stays fixed, what usually happens to the market price, all else equal?

- A. It must fall to zero.
- B. It becomes unrelated to demand.
- C. It remains permanently unchanged.
- D. It tends to rise.

101. Which principle is best illustrated when government officials must follow publicly established laws and may be held accountable for violating them?

- A. Unlimited executive power
- B. Hereditary monarchy
- C. Direct barter
- D. Rule of law

102. Which statement best illustrates federalism in the United States?

- A. Power is divided between the national government and state governments.
- B. All governmental power belongs to one local council.
- C. Courts write every law without legislatures.
- D. Citizens may vote only in national elections.

103. Which action is an example of one branch of the federal government checking another?

- A. A city opens a public library.
- B. A state builds a highway.
- C. The president vetoes a bill passed by Congress.
- D. A business changes its store hours.

104. Which activity is protected by the First Amendment right to petition the government?

- A. Refusing to obey every law personally disliked
- B. Submitting signatures asking a city council to change a policy
- C. Requiring a newspaper to print a private advertisement
- D. Preventing other citizens from speaking at a meeting

105. Which development most directly helped connect Great Lakes farming regions with Atlantic markets through New York in the early nineteenth century?

- A. The transcontinental railroad
- B. The Interstate Highway System
- C. The Panama Canal
- D. The Erie Canal

106. Which is the best example of a pull factor in migration?

- A. Crop failure in the place of origin
- B. Availability of jobs in the destination
- C. War near the migrant's home
- D. Religious persecution in the place of origin

107. During the nineteenth century, a region adds many factories and paid manufacturing jobs. Within decades, nearby city populations rise rapidly. Which explanation best connects these developments?

- A. Factories caused wage labor to disappear.
- B. Industrial growth encouraged people to return to isolated subsistence farms.
- C. Factory employment attracted workers and contributed to urbanization.
- D. Industrial growth eliminated the need for transportation networks.

108. The Great Migration in U.S. history refers largely to which movement?

- A. Millions of African Americans moving from the South to northern and western cities
- B. European nobles moving to medieval castles
- C. Colonists returning from North America to Europe after 1776
- D. Farmers moving from cities to plantations during Reconstruction

109. Which federal law prohibited discrimination in public accommodations based on race, color, religion, or national origin and also established major federal protections against employment discrimination?

- A. Homestead Act of 1862
- B. Civil Rights Act of 1964
- C. Sherman Antitrust Act of 1890
- D. Social Security Act of 1935

110. Which responsibility is most commonly associated with a local government?

- A. Adopting zoning rules for land use within the municipality
- B. Declaring war on another country
- C. Printing national currency
- D. Negotiating treaties with foreign nations

111. Ancient settlements along the Nile, Tigris-Euphrates, Indus, and Huang He benefited from a shared geographic advantage. Which advantage most directly supported early farming and exchange?

- A. Permanent protection from all floods
- B. Elimination of the need to grow food
- C. Isolation from every trade route
- D. Water, fertile soils, and transportation routes

112. Which event occurred first?

- A. The Progressive Era reforms of the early 1900s
- B. The New Deal of the 1930s
- C. Reconstruction after the Civil War
- D. The civil rights movement of the 1950s and 1960s

113. A conductor asks an ensemble to perform the same melody at 120 beats per minute instead of 80 beats per minute. Which musical element has changed?

- A. Tempo
- B. Timbre
- C. Pitch range
- D. Harmony

114. Which visual-art technique creates the illusion that parallel lines recede toward a vanishing point?

- A. Collage
- B. Stippling
- C. Linear perspective
- D. Symmetrical balance

115. A script includes bracketed notes such as '[crosses to the window]' and '[whispers].' What do these notes primarily provide?

- A. Ticket-price information for the audience
- B. Directions for actions, movement, or delivery in performance
- C. Replacement dialogue that actors must speak aloud
- D. A ranking of the actors by importance

116. Which activity most directly develops cardiorespiratory endurance when performed regularly at an appropriate intensity?

- A. Holding a brief stretch without movement
- B. Doing one isolated hand exercise
- C. Practicing a single balance pose for a few seconds
- D. Sustained brisk walking or jogging

117. Which food choice is generally a good source of dietary fiber?

- A. Clear soda
- B. Oatmeal made from whole oats
- C. Hard candy
- D. Butter

118. Before preparing sandwiches after handling raw chicken, what food-safety step is essential?

- A. Wipe hands on a dry towel only.
- B. Rinse hands briefly with cold water only.
- C. Put on an apron without washing hands.
- D. Wash hands thoroughly with soap and water before touching ready-to-eat food.

119. A student team must finish a presentation by Friday. Which behavior best demonstrates effective workplace teamwork?

- A. Agree on roles, communicate progress, and help resolve problems collaboratively.
- B. Hide important information so one person controls the project.
- C. Ignore deadlines until the final hour.
- D. Refuse to consider feedback from teammates.

120. A 12-ounce package of rice costs \$3.00, and an 18-ounce package costs \$4.14. Which package has the lower unit price per ounce?

- A. The 12-ounce package at \$0.30 per ounce
- B. Both packages at \$0.25 per ounce
- C. The 18-ounce package at \$0.23 per ounce
- D. The 12-ounce package at \$0.20 per ounce

Practice Exam 8: Answer Key and Explanations

- 1. D** — The student is separating one spoken word into its individual phonemes, so the demonstrated skill is phoneme segmentation. Crust contains five phonemes even though two consonant blends appear in the spelling. Syllable blending combines larger sound units, rhyming identifies similar endings, and print concepts concern written-language conventions rather than analyzing speech sounds.
- 2. B** — In many English words, c represents /s/ when it appears before e, i, or y. City begins with c followed by i, so the soft-c pattern explains the initial sound. An open syllable concerns vowel pronunciation, ci is not functioning as a vowel team here, and final y does not control the first consonant.
- 3. A** — The student is using derivational morphology by recognizing that a meaningful affix changes or refines the meaning of a base word. Pre- contributes the meaning before to view. Alphabetical sequencing and punctuation are unrelated, while syllable stress concerns pronunciation patterns rather than the meaning carried by prefixes and other morphemes.
- 4. C** — The passage presents a difficulty—excess waste—and then describes a response designed to address it, making problem and solution the dominant structure. A chronological biography traces a person's life, compare and contrast emphasizes similarities and differences, and definition-example organization explains a concept rather than resolving a stated community problem. This directly matches the evidence in the stem.
- 5. D** — The revision beginning with Although turns the first idea into a dependent clause and keeps the second as an independent clause, creating a complex sentence. The choices joined with and or a semicolon connect two independent clauses, while leaving two separate sentences does not combine them into the requested structure.
- 6. B** — The pronouns she and her can each refer to Lena or Sofia, so the reader cannot determine the intended antecedents with certainty. The sentence has verbs, uses acceptable past tense, and contains no apostrophe issue. Revising with the names or clearer noun phrases would remove the ambiguity and improve coherence.
- 7. C** — The sentence gives the floorboards the humanlike action of groaning, so personification is the best description. Groaned may also suggest a sound, but the central figurative effect is assigning a human behavior to an inanimate object. An allusion references another work or event, and hyperbole deliberately exaggerates beyond literal possibility.
- 8. A** — The supporting details all describe different environmental advantages of rooftop gardens, so the broad statement that they provide several benefits captures the main idea. The other options overgeneralize one detail, introduce an absolute claim, or state information not supported by the paragraph. A main idea must encompass the central cluster of details.

9. A — The phrase a garden devoted to trees directly renames and defines arboretum, so it functions as an appositive context clue. Word position does not reveal meaning, the verb opened identifies an action, and the walking-trail phrase adds information about the place without explaining what an arboretum itself is. This directly matches the evidence in the stem.

10. C — An index lists important topics alphabetically and gives the pages on which they appear, making it the most efficient feature for locating every discussion of erosion. A chapter title gives only a broad topic, a caption explains a specific visual, and a dedication does not help readers locate content within the book.

11. D — A narrator who participates in the story and refers to self as I is using first-person point of view. The narration is limited to that character's observations and thoughts. Third-person forms use he, she, or they, while second person directly addresses a reader or character as you. This directly matches the evidence in the stem.

12. B — Kai's attention to dark clouds, protective clothing, and moving the basket under shelter together support the inference that he expects rain. The passage gives no evidence that he dislikes outdoor meals, forgot the basket's location, or intends to leave. A sound inference combines several textual clues with reasonable background knowledge.

13. D — The prefix re- means again, the base use supplies the core action, and the suffix -able means capable of. Together, reusable means able to be used again. The distractors either reverse the suffix meaning, ignore the prefix, or add an idea about speed that is not contained in the word's morphemes.

14. B — The simple subject is basket, which is singular, so the singular verb was agrees with it. The prepositional phrase of apples does not change the number of the subject. Were, have, and are are plural forms in these choices and therefore do not agree with the singular noun basket. This directly matches the evidence in the stem.

15. C — A fable is a short traditional narrative that often uses talking animals and ends with an explicit or implied moral lesson. Historical fiction places invented characters in a historical setting, biography recounts a real person's life, and science fiction depends on speculative science or technology rather than a simple moral tale.

16. A — However signals that the next statement contrasts with or qualifies the previous idea. For example introduces an illustration, therefore signals a result or conclusion, and similarly emphasizes likeness. Recognizing transition words helps readers follow relationships among ideas and helps writers make those relationships explicit across sentences and paragraphs. This directly matches the evidence in the stem.

17. B — The student restates the speaker's claim in new words while preserving its essential meaning, which is paraphrasing. Effective paraphrasing shows attentive listening and checks understanding. The response does not introduce a new topic, perform oral reading, or identify a text feature, so those choices describe unrelated literacy behaviors. This directly matches the evidence in the stem.

18. C — The student specifically needs practice attending to medial vowel phonemes, so stretching consonant-vowel-consonant words and identifying the middle sound directly targets the gap. Genre sorting, alphabetical order, and capitalization address other literacy skills. Explicit phoneme work should isolate the exact sound position the student is not yet analyzing consistently. This directly matches the evidence in the stem.

19. A — Beginning short-vowel instruction should explicitly connect the grapheme a with its common short sound in decodable examples such as map, sat, and jam. Memorizing multisyllabic words skips the targeted correspondence, while theme analysis and article comparison are comprehension tasks rather than foundational decoding practice. This directly matches the evidence in the stem.

20. D — A decodable passage containing the newly taught ai pattern lets students apply the target correspondence in connected text while relying largely on previously learned sound-spelling relationships. A text dominated by untaught patterns or irregular words creates unnecessary guessing demands, and picture dependence does not provide the same direct practice in accurate word recognition.

21. B — The student can identify component sounds but needs support blending them into a whole word. Continuous blending followed by a smooth sweep directly models that process. Guessing from a picture or skipping the word avoids decoding, while naming punctuation does not address the difficulty combining phonemes during word reading. This directly matches the evidence in the stem.

22. D — Orthographic mapping is strengthened when students connect the word's phonemes to its graphemes and attend explicitly to the irregular part. In said, the vowel spelling is unexpected for beginning readers, so identifying what is regular and what must be remembered supports durable word recognition. Copying or picture guessing does not build the same sound-symbol memory.

23. A — A closed syllable ends in a consonant and typically contains a short vowel. The first syllable nap in napkin ends with p and has short a, so it fits the pattern. The first syllables pi, mu, and ti are open syllables ending in vowels and generally use long-vowel sounds. This directly matches the evidence in the stem.

24. C — Dividing a multisyllabic word into pronounceable parts reduces decoding load and allows the reader to apply known syllable patterns before blending the parts into the whole word. Guessing from the first letter or substituting another word is unreliable, while treating a long unfamiliar word as one unit provides no useful decoding support.

25. A — Repeated oral reading with feedback gives the student multiple accurate encounters with the same words and phrasing, helping word recognition become more automatic. An overly difficult silent passage provides little supported practice, while definition memorization and copying focus on vocabulary or handwriting rather than fluent, efficient recognition of connected text.

26. B — Teacher modeling makes prosody audible by demonstrating how phrasing, pauses, stress, and intonation reflect syntax and meaning. Discussing those choices helps students connect expression with comprehension. Speed alone can reduce meaningful phrasing, removing punctuation obscures cues, and counting letters does not develop oral reading fluency. This directly matches the evidence in the stem.

27. D — Analyzing dis-, agree, and -ment uses morphology to break the word into meaningful units that support both pronunciation and meaning. The prefix signals negation or reversal, the base carries the core meaning, and the suffix forms a noun. Rhyme, punctuation, and whole-word memorization provide less efficient support for this transparent structure.

28. C — Run ends with a single consonant after a short stressed vowel, so the final n doubles before adding -ing. Rain already contains a vowel team and does not fit that consonant-doubling pattern. The rule does not apply to every word ending in n or every word containing two vowels. This directly matches the evidence in the stem.

29. B — A semantic map organizes related concepts and makes meaningful connections among words students will encounter in the article. Linking migration with routes, seasons, habitats, and resources builds a conceptual network that supports comprehension. Alphabetizing, copying, and punctuation practice may have other purposes but do not develop topic-specific vocabulary relationships. This directly matches the evidence in the stem.

30. A — Visuals, gestures, realia, and explicit language models make meaning accessible while expanding the learner's English vocabulary for a concept already understood. Requiring silence limits productive language practice, accent correction does not build conceptual vocabulary, and ignoring background knowledge removes a valuable resource for connecting new English forms with existing understanding.

31. D — A structured beginning-middle-end retell makes the temporal organization of a narrative visible and requires the student to select and sequence major events. Word sorting, handwriting practice, and author biography do not target narrative organization. Retelling also gives the teacher direct evidence of whether the student understands how events connect across the story.

32. C — The think-aloud combines a specific textual clue—checking the clock—with background knowledge to form a reasonable inference about the character's concern. Counting sentences and copying text do not demonstrate inferential reasoning, while skipping unfamiliar language removes evidence. Effective modeling makes the normally invisible reasoning process explicit for students. This directly matches the evidence in the stem.

33. A — Words such as similarly, unlike, both, and whereas explicitly signal similarities and differences, which are central to compare-and-contrast organization. First and next indicate sequence, because and therefore signal cause and effect, and problem and solution language signals a different informational structure. Teaching these cues supports strategic comprehension of nonfiction. This directly matches the evidence in the stem.

34. B — Comprehension monitoring means noticing a breakdown and deliberately applying a repair strategy. Stopping, rereading, and using context directly addresses the loss of meaning. Continuing without awareness is the opposite of monitoring, while unrelated guessing and word counting do not help the reader reconstruct the author's intended message. This directly matches the evidence in the stem.

35. C — Planning occurs before drafting and includes selecting, grouping, and organizing ideas. Sorting researched facts into categories gives students a structure for an explanatory paragraph before sentences are composed. Correcting commas is editing, replacing weak verbs is revision, and posting the finished piece is publication rather than prewriting or planning. This directly matches the evidence in the stem.

36. D — Adding a scene that explains the character's change strengthens the development of the narrative and helps events connect logically, improving coherence. Letter formation and spelling are transcription concerns, while bibliographic formatting is relevant to source documentation. Revision focuses on meaning, organization, detail, and effectiveness rather than surface correctness alone. This directly matches the evidence in the stem.

37. B — An official municipal parks-department website is the strongest source for current local regulations because it is produced by the authority responsible for those rules. Anonymous comments and unsourced blogs have uncertain reliability, while fiction is not intended to document current policy. Source evaluation should consider authority, currency, purpose, and evidence.

38. A — Asking students to use textual evidence to support or challenge a peer's interpretation encourages them to listen, respond to ideas, and justify claims. Accountable talk builds reasoning within a shared discussion. The other prompts reward brevity, conformity, or closure rather than evidence-based interaction and thoughtful engagement with multiple perspectives. This directly matches the evidence in the stem.

39. D — The key media-literacy issue is how the athlete's image creates an association between the product and success, influencing the audience without proving the product causes athletic achievement. Letter counting and minor visual details do not analyze persuasion, and the exact number of cereal pieces is irrelevant to the advertisement's rhetorical strategy.

40. C — The phrase creates a vivid sensory picture by comparing rain to silver thread stitching circles on a pond, so imagery and figurative language are prominent. The line is not presenting a formal claim, organizing historical dates, or defining a technical term. Poetic imagery helps readers visualize and experience an idea through carefully chosen language.

41. A — Compare the decimals by place value. All have 4 in the ones place, so compare tenths: 4.805 has 8 tenths, which is greater than 5 tenths, 0 tenths, or 0 tenths in the other choices. Therefore 4.805 is the greatest value. A quick substitution or recalculation confirms the keyed value and eliminates the other three numerical choices.

42. C — The number of identical packets must divide both 48 and 60, so the greatest possible number is their greatest common factor. The common factors include 1, 2, 3, 4, 6, and 12, with 12 largest. Each packet would then contain 4 rhythm cards and 5 melody cards. This directly matches the evidence in the stem.

43. D — Divide the total oats by the amount used per batch: $4\frac{1}{2} \div \frac{3}{4} = \frac{9}{2} \times \frac{4}{3} = 6$. The reciprocal multiplication shows that exactly six batches can be prepared. The smaller choices result from subtracting or dividing without first interpreting the mixed number correctly. This directly matches the evidence in the stem.

44. B — The ratio 3:5 means every 3 red beads correspond to 5 blue beads. Multiplying 3 by 8 gives 24 red beads, so multiply 5 by the same scale factor: $5 \times 8 = 40$ blue beads. Maintaining the same multiplicative factor preserves the proportional relationship. This directly matches the evidence in the stem.

45. D — A per-minute data rate is found by dividing total file size by elapsed minutes: $31.5 \div 2.25 = 14$. The recorder therefore adds 14 megabytes each minute. Multiplying the quantities or rounding the time before dividing would change the relationship and can lead to the other listed rates. A direct recalculation confirms the result.

46. A — Convert 35% to 0.35 and multiply by the whole: $0.35 \times 240 = 84$. Another method is $\frac{35}{100} \times 240$, which also gives 84. The distractors reflect using a different percentage or performing an unrelated operation rather than finding the stated percent of the total. This directly matches the evidence in the stem.

47. C — If y is always 2.5 times x , then the constant of proportionality is 2.5 and the relationship is $y = 2.5x$. Additive equations do not maintain a constant ratio y/x . Substituting any positive x confirms that only the keyed equation gives y divided by x equal to 2.5. This directly matches the evidence in the stem.

48. B — Negative 1.5 lies farther left on the number line than negative 1.2, so it is smaller. Among the positive values, 0.4 is less than three-fourths, or 0.75. Therefore the ascending order is negative 1.5, negative 1.2, 0.4, then 0.75. Each distractor reverses at least one of these comparisons. in sequence.

49. B — The magnitude of the change is the absolute difference between the two temperatures: $|5 - (-6)| = |11| = 11^\circ\text{C}$. A temperature change can be described by a positive magnitude even when one starting value is negative. The distractors arise from ignoring the negative sign or using unrelated operations. This directly matches the evidence in the stem.

50. A — The audiobook portion is $\frac{7}{16}$ of the display. Dividing 7 by 16 gives 0.4375, so that decimal represents the same share of featured titles. The other decimals correspond to different fractions or to combining the digits without division. Fraction-decimal equivalence requires preserving the same numerical value throughout the conversion. This calculation confirms the proportion exactly.

51. D — Attendance increased by $920 - 800 = 120$ visitors. Percent increase compares the change with the original amount: $120/800 = 0.15 = 15\%$. Dividing by the new amount instead of the original or confusing the numerical change with a percentage leads to the distractors. A quick substitution or recalculation confirms the keyed value and eliminates the other three numerical choices.

52. C — The map scale gives 6 kilometers for 2.5 centimeters. The route is $8.75 \div 2.5 = 3.5$ scale units long, so its actual length is $3.5 \times 6 = 21$ kilometers. Using addition or reversing the scale ratio would not maintain the stated proportional relationship. The other choices do not meet the condition described in the stem.

53. D — Convert five and one-fourth to twenty-one fourths, then divide by three-eighths. Multiplying by the reciprocal gives fourteen. Because the quotient is a whole number, fourteen complete pieces use the entire roll. The distractors reflect common errors with the mixed number or reciprocal. Recomputing the division confirms the keyed value and eliminates the other choices.

54. C — Distance equals rate multiplied by time when speed is constant. Compute $72 \times 2.5 = 180$ kilometers. Dividing the rate by time or using only the whole-number part of 2.5 would give smaller results. The product correctly accounts for two full hours plus an additional half hour. This directly matches the evidence in the stem.

55. B — Model the moves with signed integers: starting at -7 and rising 12 gives $-7 + 12 = 5$. Descending 5 then gives $5 - 5 = 0$. A number line shows the same movement. Ignoring the negative starting level or changing the direction of a move produces the distractors. That comparison is the central idea being assessed in this item.

56. A — Use the multiplication principle because every first-stage choice can pair with every second-stage choice. There are $2^4 = 16$ first-stage codes and $2^3 = 8$ second-stage codes, so $16 \times 8 = 128$ complete pairs. Adding the counts or mishandling exponents gives the smaller distractor values. The other choices do not meet the condition described in the stem.

57. A — Scientific notation requires a coefficient at least 1 but less than 10. Moving the decimal in 0.00056 four places right gives 5.6, so the exponent is -4 : 5.6×10^{-4} . Other expressions may equal the number but do not meet standard coefficient form, or use the wrong exponent sign. This directly matches the evidence in the stem.

58. C — The square root of 50 simplifies to five times the square root of 2. Because the square root of 2 is irrational, this length cannot be written as a ratio of two integers. The terminating decimals 0.125 and 2.75 are rational, and seven-ninths is already a ratio. Only the radical length is irrational.

59. D — Substitute -2 for n : $S = 3(-2)^2 - 2(-2) + 1$. Squaring first gives 4, so the expression becomes $12 + 4 + 1 = 17$. The negative input does not make the squared term negative. Sign and order-of-operations errors produce the other choices. The other choices do not meet the condition described in the stem.

60. B — Let x be the price of one kit. The situation gives $4x + 9 = 37$. Subtract 9 to get $4x = 28$, then divide by 4 to obtain $x = 7$. Substitution confirms that four \$7 kits plus \$9 cost \$37, eliminating the other prices. The other choices do not meet the condition described in the stem.

61. B — The capacity condition is $4g + 3 < 19$. Subtracting 3 gives $4g < 16$, so $g < 4$. Of the choices, only 3 groups satisfies the strict inequality. Four groups would make exactly 19 people, which is not allowed because the van must carry fewer than 19. The other choices do not meet the condition described in the stem.

62. A — The sequence increases by 5 each term, so its linear rule has slope 5. Using $n = 1$ and value 6 gives $6 = 5(1) + b$, so $b = 1$. Therefore the n th term is $5n + 1$. Checking $n = 2$ gives 11, confirming the rule. This directly matches the evidence in the stem.

63. C — The patio area is 12 times 7, or 84 square meters. The flower bed occupies 3 times 2, or 6 square meters. Subtracting gives 78 square meters remaining. Adding the areas or subtracting side lengths instead of areas would produce incorrect results. Area, not perimeter, determines the surface left for the patio.

64. D — For a prism, volume equals base area multiplied by perpendicular height. The aquarium's base area is 40 square centimeters and its height is 6 centimeters, so $V = 40 \times 6 = 240$ cubic centimeters. Adding the measurements or multiplying by an unrelated factor produces the distractors. The other choices do not meet the condition described in the stem.

65. C — Adjacent angles whose noncommon sides form a straight line make a linear pair and sum to 180° . Subtracting gives $180^\circ - 128^\circ = 52^\circ$. Only 52° completes the straight angle. The other choices leave the total below or above 180° , so they cannot satisfy the geometric relationship. The other choices do not meet the condition described in the stem.

66. B — Mirroring across the vertical axis $x = 0$ is a reflection across the y -axis. This changes the sign of the x -coordinate and leaves the y -coordinate unchanged, so $(2, -3)$ becomes $(-2, -3)$. The other choices change the wrong coordinate, swap coordinates, or describe another transformation. The other choices do not meet the condition described in the stem.

67. A — The data are already ordered from least to greatest. With five values, the median is the single middle value, which is the third number: 15. The mean would require adding and dividing, while 18 and 25 are data values but not the central position. Therefore the median is 15 pages.

68. D — Because all 12 sectors are equal, each is equally likely. Three green sectors out of 12 total sectors gives a probability of three-twelfths, which simplifies to one-fourth. The other fractions use an incorrect numerator or denominator. Probability compares favorable equally likely outcomes with the complete set of possible outcomes, so one-fourth is the correct choice.

69. A — The lower half is 3, 5, 6, 8, whose median is $(5 + 6)/2 = 5.5$. The upper half is 11, 13, 14, 20, whose median is $(13 + 14)/2 = 13.5$. The interquartile range is $13.5 - 5.5 = 8$. The arithmetic also rules out the distractors because each reflects a different operation, conversion, or common computational mistake.

70. B — One kilometer equals 1,000 meters, so multiply 3.6 by 1,000 to convert kilometers to meters. The result is 3,600 meters. Moving the decimal only two places or in the wrong direction produces the distractors. Unit conversion should preserve the actual physical length while changing the numerical representation. This directly matches the evidence in the stem.

71. D — For a rectangle, perimeter equals twice the length plus twice the width. With a perimeter of 54 centimeters and length of 16 centimeters, the two lengths total 32 centimeters. The remaining 22 centimeters belong to two equal widths, so each width is 11 centimeters. This uses all four sides of the rectangle correctly.

72. C — Circumference is π times the diameter. Using 3.14 and diameter 10 gives $C = 3.14 \times 10 = 31.4$ centimeters. The area formula would involve the radius squared, while multiplying or dividing by unrelated values yields the distractors. The given diameter can be used directly in $C = \pi d$. This directly matches the evidence in the stem.

73. C — Each time x increases by 1, y increases by 3, so the slope is 3. When $x = 0$, $y = 4$, giving a y -intercept of 4. Therefore the equation is $y = 3x + 4$. Substituting the table values confirms every ordered pair satisfies that rule. This directly matches the evidence in the stem.

74. A — A cube has six congruent square faces. Each face has area $4 \times 4 = 16$ square centimeters, so the total surface area is $6 \times 16 = 96$ square centimeters. The values 64 and 16 describe volume or one face, while 48 uses only three faces. This directly matches the evidence in the stem.

75. D — The range depends only on the maximum and minimum values. Subtract 12 from 40 to obtain 28. Quartiles and the median describe other parts of the distribution but are not used in the range calculation. Confusing $Q3 - Q1$ with range would instead calculate the interquartile range. This directly matches the evidence in the stem.

76. B — A place-value chart makes the role of zero visible: in 4,306, the zero shows that there are no tens while preserving the positions of the hundreds and ones digits. Memorization or correction without representation does not reveal the misconception, and multiplication practice is unrelated to the student's place-value reasoning. This directly matches the evidence in the stem.

77. D — Equal-length strips keep the whole constant and make the size of unit-fraction pieces visible. When the same whole is divided into eighths, each piece is smaller than a sixth, directly contradicting the student's rule. The other representations do not show how denominator size affects the size of one equal part.

78. A — Completing a ratio table and explaining the multiplicative pattern reveals both the student's answer and the reasoning used to generate equivalent ratios. Copying does not show independent understanding, memorizing a definition gives limited evidence of application, and an unrelated geometry worksheet cannot assess the targeted proportional reasoning. This directly matches the evidence in the stem.

79. C — Asking why a square also qualifies as a rectangle and a rhombus focuses students on defining attributes and category inclusion. A square has four right angles and four equal sides, satisfying both definitions. Questions about names, speed, or shapes with no parallel sides do not develop the hierarchical structure of quadrilateral classifications.

80. B — Once the line plot is constructed, asking students to analyze clusters, gaps, and typical values develops interpretation of the data rather than merely recording it. Erasing the data or shifting to unrelated tasks wastes the representation. Discussion should connect the visual distribution to questions about variation and center in the measured heights.

81. D — Chloroplasts contain pigments and cellular structures that capture light energy for photosynthesis, allowing plants to make energy-rich sugars from carbon dioxide and water. The nucleus stores genetic information, the cell membrane regulates movement into and out of the cell, and the vacuole primarily stores water and other materials. This directly matches the evidence in the stem.

82. C — Fungi that break down dead organic matter are decomposers. They return nutrients from dead organisms and wastes to the environment, where producers can use them again. Producers make their own food, primary consumers eat producers, and top predators feed at higher trophic levels rather than decomposing dead material. This directly matches the evidence in the stem.

83. A — Large ears that help dissipate heat are a structural adaptation because the inherited physical feature can improve survival in a hot environment. A learned behavior is acquired through experience, weather is an environmental condition, and soil properties are nonliving factors. The example concerns a body structure linked to environmental fitness.

84. B — Water vapor in the surrounding air cools near the cold glass and changes from gas to liquid droplets, a process called condensation. Freezing changes liquid to solid, melting changes solid to liquid, and sublimation changes solid directly to gas. The water does not pass through the glass from inside. This directly matches the evidence in the stem.

85. A — Sandpaper's rougher surface produces greater friction opposing the block's motion, so the same applied force results in less easy movement. Gravity acts on both blocks, mass does not disappear, and roughness does not automatically create magnetism. Friction depends on the interacting surfaces and resists relative motion. This directly matches the evidence in the stem.

86. C — A battery stores chemical energy. When the circuit is closed, chemical reactions drive electric current, and the bulb or LED converts electrical energy mainly into light, with some thermal energy. The process does not begin with light, nuclear, or sound energy, so those choices do not describe a flashlight's normal operation.

87. B — A fixed pulley uses a grooved wheel and rope to change the direction of an applied force, such as pulling downward to raise a load upward. A wedge separates material, a screw converts rotational motion through threads, and an inclined plane provides a sloped surface for moving a load over distance.

88. D — Electric current requires a continuous conducting path through the circuit. The gap creates an open circuit, so charge cannot travel around the complete loop and the bulb remains off. Batteries do provide electrical potential, current does not jump ordinary open gaps, and room lighting has no bearing on circuit continuity.

89. B — Infiltration is the movement of water from the ground surface into soil. Evaporation changes liquid water to vapor, condensation changes vapor to liquid, and transpiration is the release of water vapor from plants. The stem specifically describes rainwater entering pore spaces in the ground rather than changing state. This directly matches the evidence in the stem.

90. C — Sedimentary rock commonly forms when deposited sediments are compacted by overlying material and cemented together by minerals precipitating from water. Melting and cooling produce igneous rock, vaporization does not lithify sediment, and nuclear fusion is a stellar process. Compaction and cementation therefore match the rock-forming mechanism described. This directly matches the evidence in the stem.

91. D — When advancing cold air undercuts warmer air, the warm air can rise quickly, cool, and condense, producing a relatively narrow zone of clouds, showers, or thunderstorms along a cold front. The boundary does not stop evaporation permanently, and rapid lifting makes unchanged cloud conditions unlikely. This directly matches the evidence in the stem.

92. A — Seasons result from Earth's axial tilt combined with its revolution around the Sun. During part of the orbit, a hemisphere is tilted toward the Sun and receives more direct sunlight and longer days; later it is tilted away. Seasonal temperature patterns are not caused primarily by changing Earth-Sun distance or lunar effects.

93. A — The Moon does not produce its own visible light like a star. Its sunlit surface reflects sunlight toward Earth, and changing viewing geometry creates the familiar phases. Nuclear fusion powers stars, not the Moon, while stored daylight and Earth's magnetic field do not explain the Moon's ordinary visible brightness. This directly matches the evidence in the stem.

94. D — A carrying capacity reflects the population size an environment can sustain with available food, space, water, and other resources. When a population exceeds that level, competition generally increases and survival or reproduction may decline. Resources do not become unlimited, and predator presence or reproduction rates are not guaranteed to remain unchanged.

95. B — Natural eye color is strongly influenced by inherited genetic information passed from parents to offspring. Playing piano, knowing a route, and tying a knot are learned skills that depend on experience and practice. Although environment can influence many traits, eye color is the clearest inherited biological characteristic among these choices.

96. C — To test the effect of ramp height, students should deliberately vary height while holding other important conditions constant. Keeping the same car, release procedure, and surface reduces confounding variables, so changes in distance can be attributed more reasonably to height. Changing several factors at once prevents a clear causal comparison.

97. B — A diary written by a participant during the 1910 strike is a primary source because it was created during the period by someone directly experiencing events. Textbooks, documentaries, and encyclopedias are later secondary interpretations that synthesize other evidence. Primary sources can reveal contemporary perspectives, though historians still evaluate bias and context.

98. C — A map scale converts measured map distance to real distance. With 1 inch representing 50 miles, 3 inches represents $3 \times 50 = 150$ miles. Adding the values or doubling incorrectly would not preserve the scale relationship. The legend provides the proportional information needed to interpret distance. This directly matches the evidence in the stem.

99. A — Opportunity cost is the value of the next-best alternative given up when a choice is made. If the town selects the playground, the forgone pool repairs are the opportunity cost. The concept is not the total tax base, unrelated market prices, or the number of users; it focuses on the sacrificed alternative.

100. D — When demand increases while supply remains fixed, more buyers compete for the same quantity, creating upward pressure on price in a typical market. Price does not necessarily fall, become unrelated to demand, or remain unchanged. The phrase all else equal isolates the basic supply-and-demand relationship being tested. This directly matches the evidence in the stem.

101. D — Rule of law means that laws govern both citizens and public officials rather than placing leaders above legal constraints. Accountability under publicly established rules is central to that principle. Unlimited executive power and hereditary monarchy describe different political arrangements, while barter is an economic exchange system unrelated to legal accountability.

102. A — Federalism divides governmental authority between a national government and state governments, with powers allocated through the Constitution and later legal development. It does not place all power in one local body, eliminate legislatures, or restrict voting to national contests. The defining feature is shared sovereignty across levels of government. This directly matches the evidence in the stem.

103. C — A presidential veto is a constitutional check on Congress because the executive can reject legislation passed by the legislative branch, subject to Congress's power to override under specified conditions. City libraries, state highways, and private business hours do not illustrate one federal branch checking another branch's exercise of power. This directly matches the evidence in the stem.

104. B — The Petition Clause protects the ability to ask government for redress or policy change, so submitting a signed request to a city council is a clear example. The First Amendment does not create a general right to ignore laws, compel private publication, or silence other citizens' protected expression. This directly matches the evidence in the stem.

105. D — The Erie Canal linked the Hudson River with Lake Erie, dramatically improving transportation between the Great Lakes region and Atlantic markets through New York. The transcontinental railroad came later and connected east and west by rail, the Interstate Highway System is twentieth century, and the Panama Canal connects the Atlantic and Pacific oceans.

106. B — A pull factor attracts people toward a destination, and the availability of jobs can draw migrants seeking economic opportunity. Crop failure, war, and persecution are push factors because they create pressures that encourage people to leave their place of origin. Migration decisions often involve both push and pull influences. This directly matches the evidence in the stem.

107. C — Factories concentrated wage-paying employment in urban areas, drawing workers from rural communities and from abroad and contributing to rapid city growth. This process is urbanization associated with industrialization. Wage labor expanded rather than vanished, subsistence farming did not replace factories, and transportation systems generally expanded to support industrial production and trade.

108. A — The Great Migration describes the large-scale movement of African Americans from the rural South to cities in the North, Midwest, and West, especially during the twentieth century. People sought jobs and greater opportunities while escaping segregation and racial violence. The other choices describe unrelated or historically inaccurate movements. This directly matches the evidence in the stem.

109. B — The Civil Rights Act of 1964 is the correct law. Title II prohibited discrimination in public accommodations based on race, color, religion, or national origin, while Title VII addressed employment discrimination and included sex among its protected categories. The other laws concerned western land, business competition, or social insurance rather than these civil-rights protections.

110. A — Local governments commonly regulate land use through zoning ordinances and planning decisions within their jurisdictions. Declaring war, printing national currency, and negotiating treaties are federal responsibilities under the U.S. constitutional system. The item distinguishes services and regulatory powers exercised locally from powers reserved to the national government. This directly matches the evidence in the stem.

111. D — Major river valleys supplied water for people and crops, deposited fertile sediments in many floodplains, and provided routes for movement and exchange. These advantages supported agriculture and larger settlements. Rivers did not eliminate flooding, agriculture, or trade; instead, people had to manage environmental risks while using river resources to sustain communities.

112. C — Reconstruction began after the Civil War in the 1860s and preceded the Progressive Era, the New Deal, and the mid-twentieth-century civil rights movement. Placing these periods in chronological order helps establish historical sequence: Reconstruction, Progressive Era, New Deal, then the major civil rights campaigns of the 1950s and 1960s. This directly matches the evidence in the stem.

113. A — Beats per minute measure the rate of the underlying beat, so increasing from 80 to 120 changes the tempo. Timbre is tone color, pitch range concerns how high and low the notes extend, and harmony concerns simultaneous pitches. The melody can remain the same while its performance speed changes substantially.

114. C — Linear perspective creates an illusion of depth by representing parallel lines as converging toward one or more vanishing points. Collage combines separate materials, stippling builds value with dots, and symmetrical balance organizes visual weight around an axis. The described receding-line system is specifically a perspective technique. This directly matches the evidence in the stem.

115. B — Bracketed notes like crosses to the window and whispers are stage directions. They guide performers about movement, action, tone, setting, or delivery without becoming ordinary spoken dialogue. They do not provide ticket information, replace all dialogue, or rank performers. Their purpose is to support staging and interpretation during performance. That comparison is the central idea being assessed in this item.

116. D — Cardiorespiratory endurance improves through sustained rhythmic activity that challenges the heart, lungs, and circulatory system over time. Brisk walking or jogging can provide that aerobic demand when performed regularly at an appropriate intensity. Brief stretching, isolated hand work, and a short balance pose target different fitness components. This directly matches the evidence in the stem.

117. B — Whole oats contain dietary fiber, including soluble fiber, so oatmeal made from whole oats is a strong choice among the options. Clear soda, hard candy, and butter contain little or no dietary fiber. Fiber is found primarily in plant foods such as whole grains, fruits, vegetables, legumes, nuts, and seeds.

118. D — Raw poultry can carry harmful microorganisms, so hands should be washed thoroughly with soap and water before touching ready-to-eat foods such as sandwich ingredients. A towel, water-only rinse, or apron does not reliably remove contamination. Preventing cross-contamination is a basic food-safety practice when moving from raw animal products to foods eaten without further cooking.

119. A — Effective teamwork depends on clear roles, communication, shared responsibility, and collaborative problem solving. Agreeing on responsibilities and updating teammates helps coordinate work toward the deadline. Withholding information, ignoring deadlines, or rejecting feedback undermines trust and efficiency. These behaviors make it harder for a group to complete a quality product together.

120. C — Compute each unit price by dividing cost by ounces. The 12-ounce package costs $\$3.00 \div 12 = \0.25 per ounce. The 18-ounce package costs $\$4.14 \div 18 = \0.23 per ounce, so the larger package has the lower unit price. Unit-price comparison requires using the same unit for both choices.