

FTCE
ELEMENTARY
EDUCATION K-6

Sample Test

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Boston

FTCE Elementary Education K-6 Sample Test

LANGUAGE ARTS AND READING

1. **All of the following are true about phonological awareness EXCEPT:**
(Average) (Skills 1.1, 2.1)

- A. It may involve print.
- B. It is a prerequisite for spelling and phonics.
- C. Activities can be done by the children with their eyes closed.
- D. It starts before letter recognition is taught.

2. **The arrangement and relationship of words in sentences or sentence structure best describes:**
(Average) (Skill 1.1)

- A. Style
- B. Discourse
- C. Thesis
- D. Syntax

3. **To decode is to:**
(Easy) (Skill 1.2)

- A. Construct meaning
- B. Sound out a printed sequence of letters
- C. Use a special code to decipher a message
- D. None of the above

4. **To encode means that you:**
(Easy) (Skill 1.2)

- A. Decode a second time
- B. Construct meaning from a code
- C. Tell someone a message
- D. None of the above

5. **Which of the following indicates that a student is a fluent reader?**
(Average) (Skill 1.3)

- A. Reads texts with expression or prosody
- B. Reads word to word and haltingly
- C. Must intentionally decode a majority of the words
- D. In a writing assignment, sentences are poorly organized structurally

6. Which of the following reading strategies is NOT associated with fluent reading abilities? *(Rigorous) (Skill 1.3)*
- A. Pronouncing unfamiliar words by finding similarities with familiar words
 - B. Establishing a purpose for reading
 - C. Formulating questions about the text while reading
 - D. Reading sentences word by word
7. Orthography is: *(Rigorous) (Skill 1.3)*
- A. The study of word structure
 - B. A method of representing a spoken language through the use of written symbols
 - C. The complete set of related word forms associated with a given lexeme
 - D. A process of word formation that involves combining complete word forms into a single compound form
8. Which word in the following sentence is a bound morpheme?
“The quick brown fox jumped over the lazy dog.” *(Rigorous) (Skill 1.5)*
- A. The
 - B. Fox
 - C. Lazy
 - D. Jumped
9. A teacher has taught his students several strategies to monitor their reading comprehension. These strategies include identifying where in the passage they are having difficulty, identifying what the difficulty is, and restating the difficult sentence or passage in their own words. These strategies are examples of: *(Average) (Skill 1.6)*
- A. Graphic and semantic organizers
 - B. Metacognition
 - C. Recognizing story structure
 - D. Summarizing

10. Which of the following is an untrue statement about a theme in literature?
(Rigorous) (Skill 1.6)
- A. The theme is always stated directly somewhere in the text.
 - B. The theme is the central idea in a literary work.
 - C. All parts of the work (plot, setting, mood) should contribute to the theme in some way.
 - D. By analyzing the various elements of the work, the reader should be able to arrive at an indirectly stated theme.

11. To explore the relationship of literature to modern life, which of these activities would NOT enable students to explore comparable themes?
(Rigorous) (Skill 1.6)
- A. After studying various world events, such as the Palestinian-Israeli conflict, students write an updated version of *Romeo and Juliet* using modern characters and settings
 - B. Before studying *Romeo and Juliet*, students watch the movie *West Side Story*
 - C. Students research the major themes of *Romeo and Juliet* by studying news stories and finding modern counterparts for the story
 - D. Students explore and compare the romantic themes of *Romeo and Juliet* and *The Taming of the Shrew*

12. Which of the following is an opinion?
(Easy) (Skill 1.7)
- A. The sky is blue.
 - B. Albany is the capital of New York State.
 - C. A dog is the best pet to have.
 - D. Humans breathe.

13. Which of the following is a fact?

(Easy) (Skill 1.7)

- A. It's going to rain.
- B. John is a liar.
- C. Joe said he believes John is a liar.
- D. The world is going to the dogs.

14. Which of the following reading strategies calls for higher-order cognitive skills?

(Average) (Skill 1.7)

- A. Making predictions
- B. Summarizing
- C. Monitoring
- D. Making inferences

15. Which is NOT a true statement concerning an author's literary tone?

(Rigorous) (Skill 1.7)

- A. Tone is partly revealed through the selection of details.
- B. Tone is the expression of the author's attitude toward his/her subject.
- C. Tone in literature is usually satiric or angry.
- D. Tone in literature corresponds to the tone of voice a speaker uses.

16. Which of the following should NOT be included in the opening paragraph of an informative essay?

(Rigorous) (Skill 1.7)

- A. Thesis sentence
- B. Details and examples supporting the main idea
- C. A broad general introduction to the topic
- D. A style and tone that grabs the reader's attention

17. **“The use of steroids in professional baseball is ruining the sport.” Which of the following statements does NOT support this thesis?**

(Rigorous) (Skill 1.7)

- A. Steroids are performance enhancers and give players who take them an unfair advantage.
- B. Steroids are physically harmful to the players.
- C. Steroids make baseball more exciting because more players hit home runs.
- D. Kids in high school and college are taking steroids because they want to give themselves a better shot to make it into the major leagues.

18. **Which is NOT listed as a common difficulty in early childhood literacy programs?**

(Average) (Skill 1.11)

- A. Difficulty maintaining concentration
- B. Large-group cooperation with peers
- C. Frustration understanding text
- D. Limited vocabulary

19. **If a student uses inappropriate language that includes slang and expletives, what is the best course of action to take in order to influence the student’s formal communication skills?**

(Rigorous) (Skill 1.11)

- A. Ask the student to paraphrase the writing, that is, translate it into language appropriate for the school principal to read.
- B. Refuse to read the student’s papers until he/she conforms to a more literate style.
- C. Ask the student to read his/her work aloud to the class for peer evaluation.
- D. Rewrite the flagrant passages to show the student the right form of expression.

20. **Which of the following is NOT one of the metalinguistic abilities acquired by children from early involvement in reading activities?**

(Rigorous) (Skill 1.11)

- A. Conventions of print
- B. Word consciousness
- C. Spelling fluency
- D. Functions of print

21. Which of the following is NOT a strategy of teaching reading comprehension?
(Rigorous) (Skill 1.11)

- A. Summarization
- B. Utilizing graphic organizers
- C. Manipulating sounds
- D. Having students generate questions

22. Which of the following is NOT a characteristic of a fable?
(Easy) (Skill 2.1)

- A. Animals that feel and talk like humans
- B. Happy solutions to human dilemmas
- C. Teaches a moral or standard for behavior
- D. Illustrates specific people or groups without directly naming them

23. The children's literature genre came into its own in the:
(Average) (Skill 2.1)

- A. Seventeenth century
- B. Eighteenth century
- C. Nineteenth century
- D. Twentieth century

24. Which of the following is an example of nonfiction literature?
(Average) (Skill 2.1)

- A. Letters
- B. Biographies
- C. Journals
- D. All of the above

25. A simile is:
(Easy) (Skill 2.2)

- A. A direct comparison between two things
- B. An indirect comparison between two things
- C. When human characteristics are applied to things that are not human, such as animals
- D. Deliberate exaggeration for effect or comic effect

26. Which of the following is an example of alliteration?
(Average) (Skill 2.2)

- A. "The City's voice itself is soft like Solitude."
- B. "Both in one faith unanimous; though sad"
- C. "By all their country's wishes blest!"
- D. "In earliest Greece to these with partial choice."

27. The literary device of personification is used in which example below? (Average) (Skill 2.2)

- A. "Beg me no beggary by soul or parents, whining dog!"
- B. "Happiness sped through the halls cajoling as it went."
- C. "O wind thy horn, thou proud fellow."
- D. "And that one talent which is death to hide."

28. What syntactic device is most evident in Abraham Lincoln's "Gettysburg Address"? (Rigorous) (Skill 2.2)

It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth.

- A. Affective connotation
- B. Informative denotations
- C. Allusion
- D. Parallelism

29. When selecting multicultural literature, it is most important that the culture be portrayed: (Easy) (Skill 2.3)

- A. Accurately
- B. In a fun manner
- C. In all genres
- D. With regards to music and the arts

30. Which of the following is NOT a technique of prewriting? (Average) (Skill 3.1)

- A. Clustering
- B. Listing
- C. Brainstorming
- D. Proofreading

31. Middle and high school students are more receptive to studying grammar and syntax: (Average) (Skill 3.1)

- A. Through worksheets and end-of-lesson practices in textbooks
- B. Through independent homework assignments
- C. Through analytical examination of the writings of famous authors
- D. Through application to their own writing

32. Which of the following is NOT an approach to keep students ever conscious of the need to write for audience appeal? (Rigorous) (Skill 3.1)

- A. Pairing students during the writing process
- B. Reading all rough drafts before the students write the final copies
- C. Having students compose stories or articles for publication in school literary magazines or newspapers
- D. Writing letters to friends or relatives

33. Which of the following mostly addresses grammatical and technical errors? (Easy) (Skill 3.2)

- A. Revising
- B. Editing
- C. Proofreading
- D. Rough-draft writing

34. A student has written a paper with the following characteristics: written in first person; includes characters, setting, and plot; includes some dialogue; events organized in chronological sequence with some flashbacks. In what genre has the student written? (Easy) (Skill 3.3)

- A. Expository writing
- B. Narrative writing
- C. Persuasive writing
- D. Technical writing

35. Reading a piece of student writing to assess the overall impression of the product is: (Average) (Skill 3.5)

- A. Holistic evaluation
- B. Portfolio assessment
- C. Analytical evaluation
- D. Using a performance system

36. All of the following are correctly capitalized EXCEPT: (Average) (Skill 3.6)

- A. Queen Elizabeth
- B. Congressman McKay
- C. commander Alger
- D. the president of the United States

37. All of the following are correctly punctuated EXCEPT: *(Rigorous) (Skill 3.6)*

- A. "The book is on the table," said Bill's mother.
- B. "Who would like to sing 'The Star Spangled Banner'?" the teacher asked.
- C. I was embarrassed when Joanne said, "The meeting started an hour ago!"
- D. "The policeman apprehended the criminals last night."

38. Which of the following contains an error in possessive inflection? *(Rigorous) (Skill 3.6)*

- A. Doris's shawl
- B. Mother's-in-law frown
- C. Children's lunches
- D. Ambassador's briefcase

39. Which of the following is a formal reading-level assessment? *(Easy) (Skill 4.1, 4.2)*

- A. A standardized reading test
- B. A teacher-made reading test
- C. An interview
- D. A reading diary

40. All of the following are examples of ongoing informal assessment techniques used to observe student progress EXCEPT: *(Rigorous) (Skill 4.1, 4.2)*

- A. Analyses of student work product
- B. Collection of data from assessment tests
- C. Effective questioning
- D. Observation of students

41. Before reading a passage, a teacher gives her students an anticipation guide with a list of statements related to the topic they are about to cover in the reading material. She asks the students to indicate their agreement or disagreement with each statement on the guide. This activity is intended to: *(Rigorous) (Skill 4.3)*

- A. Elicit students' prior knowledge of the topic and establish a purpose for reading
- B. Help students identify the main ideas and supporting details in the text
- C. Help students synthesize information from the text
- D. Help students visualize the concepts and terms in the text

42. **A school district might assess the effectiveness of a new reading curriculum through:**
(Rigorous) (Skill 4.3)

- A. Formative assessment
- B. Normative assessment
- C. Diagnostic assessment
- D. Performance assessment

43. **Which best describes differentiated instruction in reading?**
(Rigorous) (Skill 4.4)

- A. Whole-group instruction
- B. Instruction based on a student's strengths
- C. Novel study
- D. Student workbooks

44. **Assessment feedback should be:**
(Easy) (Skill 4.5)

- A. Timely
- B. Specific
- C. Constructive
- D. All of the above

45. **A test is most likely to be biased if:**
(Rigorous) (Skill 4.6)

- A. It requires knowledge from out-of-school experiences.
- B. It tests discrete items taught.
- C. It is teacher-made.
- D. It requires written response.

46. **The English department is developing strategies to encourage students to become a community of readers. From the list of suggestions below, which would be the least effective way for teachers to foster independent reading?**
(Average) (Skill 4.7)

- A. Each teacher sets aside a weekly thirty-minute in-class reading session during which the teacher and students read a magazine or book for enjoyment.
- B. Teachers and students develop a list of favorite books to share with each other.
- C. The teacher assigns at least one book report each grading period to ensure that students are reading from the established class list.
- D. The students gather books for a classroom library so that books can be shared.

47. If a student has a poor vocabulary, the teacher should recommend first that:
(Average) (Skill 4.9)

- A. The student read newspapers, magazines, and books on a regular basis
- B. The student enroll in a Latin class
- C. The student write words repetitively after looking them up in the dictionary
- D. The student use a thesaurus to locate synonyms and incorporate them into his/her vocabulary

48. In preparing students for their oral presentations, the instructor provided all of the following guidelines, EXCEPT one. Which is NOT an effective guideline?
(Average) (Skill 5.2)

- A. Even if you are using a lectern, feel free to move about. This will connect you to the audience.
- B. Your posture should be natural, not stiff. Keep your shoulders toward the audience.
- C. Gestures can help communicate as long as you don't overuse them or make them distracting.
- D. You can avoid eye contact if you focus on your notes. This will make you appear more knowledgeable.

49. Which of the following is NOT an advisable strategy for making sense of oral language?
(Average) (Skill 5.3)

- A. Observe body language and other nonverbal cues.
- B. Take notes to outline major points.
- C. Critique, question, and evaluate others' as well as students' own oral presentations.
- D. Ignore prior knowledge of the topic as it does not help understanding of what is being presented.

50. Which of the following are examples of research materials that are available to use?
(Easy) (Skill 6.1)

- A. Encyclopedias
- B. Internet search engines
- C. Card catalogs
- D. All of the above

51. In general, the most serious drawback of using a computer in writing is that:
(Average) (Skill 6.1)

- A. The copy looks so good that students tend to overlook major mistakes.
- B. The spell-check and grammar programs discourage students from learning proper spelling and mechanics.
- C. The speed with which corrections can be made detracts from the exploration and contemplation of composing.
- D. The writer loses focus by concentrating on the final product rather than the details.

52. In preparing to write a research paper about a social problem, how can you determine the credibility of the information?
(Rigorous) (Skill 6.2)

- A. Realize that information on the Internet has been peer-reviewed and verified for accuracy.
- B. Find one solid source and use that exclusively.
- C. Use only primary sources.
- D. Cross-check your information with another credible source

53. Which of the following is NOT considered ethical behavior for a scientist?
(Rigorous) (Skill 6.2)

- A. Using unpublished data and citing the source
- B. Publishing data before other scientists have had a chance to replicate results
- C. Collaborating with other scientists from different laboratories
- D. Publishing work with an incomplete list of citations

SOCIAL SCIENCE

54. For the historian studying ancient Egypt, which of the following would be least useful?
(Rigorous) (Skill 7.2)

- A. The record of an ancient Greek historian on Greek-Egyptian interaction
- B. Letters from an Egyptian ruler to his/her regional governors
- C. Inscriptions from the Fourteenth Dynasty of Egypt
- D. Letters from a nineteenth-century Egyptologist to his wife

55. An example of something that is not a primary source is:
(Average) (Skill 7.2)

- A. The published correspondence between Winston Churchill and Franklin D. Roosevelt during World War II
- B. Martin Gilbert's biography of Winston Churchill
- C. The diary of Field Marshall Sir Alan Brooke, the head of the British Army during World War II
- D. Franklin D. Roosevelt's handwritten notes from the World War II era

56. Which civilization invented the wheel?
(Easy) (Skill 7.3)

- A. Egyptian
- B. Roman
- C. Assyrian
- D. Sumerian

57. **What is the Pax Romana?**
(Rigorous) (Skill 7.3)
- A. A long period of peace allowing free travel and trade, spreading people, cultures, goods, and ideas all over the world
 - B. A period of war when the Romans expanded their empire
 - C. The Roman government
 - D. A time when the government was overruled
58. **What intellectual movement during the period of North American colonization contributed to the development of public education and the founding of the first colleges and universities?**
(Average) (Skill 7.5)
- A. Enlightenment
 - B. Great Awakening
 - C. Libertarianism
 - D. Scientific Revolution
59. **The “divine right” of kings was the key political characteristic of the:**
(Average) (Skill 7.5)
- A. Age of Absolutism
 - B. Age of Reason
 - C. Age of Feudalism
 - D. Age of Despotism
60. **Which scientist is credited with launching the Scientific Revolution in the sixteenth century?**
(Rigorous) (Skill 7.5)
- A. Roger Bacon
 - B. Nicolaus Copernicus
 - C. Johannes Kepler
 - D. Isaac Newton
61. **The belief that the United States should control all of North America was called:**
(Easy) (Skill 7.6)
- A. Westward Expansion
 - B. Pan-Americanism
 - C. Manifest Destiny
 - D. Nationalism

62. Which war took the most American lives in American history?
(Easy) (Skill 7.6)

- A. Civil War
- B. Revolutionary War
- C. World War I
- D. World War II

63. The cold war involved which two countries that emerged from World War II as world powers?
(Easy) (Skill 7.6)

- A. China and Japan
- B. United States and the Soviet Union
- C. England and Brazil
- D. Afghanistan and the United States

64. The year 1619 was a memorable one for the colony of Virginia. Three important events occurred, resulting in lasting effects on U.S. history. Which of the following is NOT one of these events?
(Average) (Skill 7.6)

- A. Twenty African slaves arrived.
- B. The London Company granted the colony a charter, making it independent.
- C. The colonists were given the right by the London Company to govern themselves through representative government in the Virginia House of Burgesses.
- D. The London Company sent to the colony sixty women who were quickly married, establishing families and stability in the colony.

65. How did the United States acquire Florida from Spain?
(Average) (Skill 7.6)

- A. It was captured from Spain after the Spanish-American War.
- B. It was given to the British and became part of the original thirteen colonies.
- C. Spain ceded it to the U.S. following the War of 1812.
- D. America acquired it after World War I.

66. Which one of the following would NOT be considered a result of World War II?
(Rigorous) (Skill 7.6)

- A. Economic depression and slow resumption of trade and financial aid
- B. Western Europe no longer the center of world power
- C. The beginnings of new power struggles not only in Europe but in Asia as well
- D. Territorial and boundary changes for many nations, especially in Europe

67. U.S. concern about the possible spread of communism is most closely associated with:
(Rigorous) (Skill 7.6)

- A. The Vietnam War
- B. The Civil War
- C. The Korean War
- D. World War I

68. What was “triangular trade”?
(Rigorous) (Skill 7.6)

- A. Regulated trade between the colonies, England, and France
- B. An approach to trade that transported finished goods from the mother country to the African colonies, slaves and goods from Africa to the North American colonies, and raw materials and tobacco or rum back to the mother country
- C. An approach to trade that resulted in colonists obtaining crops and goods from the Native American tribes in exchange for finished goods from England
- D. Trade between the colonists and Africa and the West Indies

69. Which of the following is NOT a reason why Europeans came to the New World?
(Rigorous) (Skill 7.6)

- A. To find resources in order to increase wealth
- B. To establish trade
- C. To increase a ruler’s power and importance
- D. To spread Christianity

70. The westward expansion occurred for a number of reasons; however, the most important reason was:
(Easy) (Skill 7.7)

- A. Colonization
- B. Slavery
- C. Independence.
- D. Economics

71. All of the following were causes of the American Revolution EXCEPT:
(Average) (Skill 7.7)

- A. The Tea Act of 1773
- B. The Stamp Act
- C. The colonists were forced to house English troops.
- D. The colonists wanted more schools.

72. Which of the following contributed to the severity of the Great Depression in California?
(Average) (Skill 7.8)

- A. An influx of Chinese immigrants
- B. The Dust Bowl drove people out of the cities
- C. An influx of Mexican immigrants
- D. An influx of Okies

73. What was the name of the cultural revival that took place after the Civil War?
(Rigorous) (Skill 7.8)

- A. The Revolutionary War
- B. The Second Great Awakening
- C. The Harlem Renaissance
- D. The Gilded Age

74. Florida was initially inhabited by the following native peoples EXCEPT:
(Average) (Skill 7.9)

- A. Timucans
- B. Apalachee
- C. Calusa
- D. Illini

75. The first European to see Florida and sail along its coast was:
(Rigorous) (Skill 7.9)

- A. Cabot
- B. Columbus
- C. Ponce de Leon
- D. Narvaez

76. Which shows the relationship between a unit of measure on a map and the real world?
(Average) (Skill 8.2)

- A. The scale
- B. The legend
- C. The grid
- D. The compass rose

77. All of the following are examples of why the first known civilizations developed near water EXCEPT:
(Rigorous) (Skill 8.4)

- A. Rivers provided water, which both the humans and animals needed .
- B. Rivers allowed the settlers to travel so they could trade goods.
- C. The rivers attracted animals so hunters had a continuous supply of food.
- D. The rivers overflowed, which left a deposit of very rich soil.

78. The study of the social well-being of people is included in:
(Rigorous) (Skill 8.5)

- A. Geography
- B. Topography
- C. Demography
- D. Deposition

79. Which term best defines the customs, traditions, and arts of a group of people?
(Easy) (Skill 8.6)

- A. Culture
- B. Democracy
- C. Interdependence
- D. Geography

80. Which of the following is the most accurate definition of a nonrenewable resource?
(Average) (Skill 8.7)

- A. A nonrenewable resource is never replaced once used.
- B. A nonrenewable resource is replaced on a timescale that is very long relative to human life spans.
- C. A nonrenewable resource is a resource that can only be manufactured by humans.
- D. A nonrenewable resource is a species that has already become extinct.

81. All of the following are oceans EXCEPT:
(Easy) (Skill 8.8)

- A. Pacific
- B. Atlantic
- C. Mediterranean
- D. Indian

82. The Bill of Rights consists of which amendments to the U.S. Constitution?
(Easy) (Skill 9.2)

- A. Amendments 1-5
- B. Amendments 1-10
- C. Amendments 1 and 2
- D. Amendments 1-22

83. Which document includes the freedom of religion and right to trial by jury?
(Rigorous) (Skill 9.2)

- A. Bill of Rights
- B. Gettysburg Address
- C. Articles of Confederation
- D. Martin Luther King's "I Have a Dream" speech

84. Who was the principal writer of the Declaration of Independence?
(Average) (Skill 9.3)

- A. Patrick Henry
- B. Thomas Jefferson
- C. Benjamin Franklin
- D. George Washington

85. What are the three branches of the United States government?
(Easy) (Skill 9.4)

- A. Legislative, judicial, international affairs
- B. Legislative, executive, foreign trade
- C. Legislative, executive, judicial
- D. Executive, judicial, state governments

86. Economics is best described as:
(Average) (Skill 10.1)

- A. The study of how money is used in different societies
- B. The study of how different political systems produce goods and services
- C. The study of how human beings use limited resources to supply their necessities and wants
- D. The study of how human beings have developed trading practices through the years

87. **If the price of Good G increases, what is likely to happen with regard to comparable Good H? (Rigorous) (Skill 10.1)**
- A. The demand for Good G will stay the same.
 - B. The demand for Good G will increase.
 - C. The demand for Good H will increase.
 - D. The demand for Good H will decrease.

88. **When planning a family budget, decisions must include: (Rigorous) (Skill 10.4)**

- A. The stock market
- B. Needs and wants
- C. Credit rating
- D. Scarcity

MUSIC, VISUAL ARTS, PHYSICAL EDUCATION, AND HEALTH

89. **Sound waves are produced by _____ (Easy) (Skill 12.2)**

- A. Pitch
- B. Noise
- C. Vibrations
- D. Sonar

90. **Common percussion instruments include: (Average) (Skill 12.3)**
- A. Xylophone, tambourine, and bells
 - B. Trumpet, trombone, and tuba
 - C. Oboe, clarinet, and saxophone
 - D. Viola, cello, and piano

91. **In visual arts such as music and dance, the intentional, regular repetition of a given element most commonly serves as a feeling of: (Average) (Skill 12.3)**

- A. Rhythm
- B. Dissonance
- C. Contrast
- D. Dominance

92. **A combination of three or more tones sounded at the same time is called a: (Average) (Skill 12.4)**

- A. Harmony
- B. Consonance
- C. Chord
- D. Dissonance

93. During the early childhood years (ages 3-5), drama and theater experiences are especially beneficial to children because they provide the opportunity for students to: *(Rigorous) (Skill 12.6)*

- A. Apply the concept of taking turns
- B. Learn the importance of listening skills
- C. Acquire the skills needed to become a proficient reader
- D. Learn early drama skills using their five senses

94. A series of single tones which add up to a recognizable sound is called a: *(Average) (Skill 13.1)*

- A. Cadence
- B. Rhythm
- C. Melody
- D. Sequence

95. The quality of sound is the definition of: *(Average) (Skill 13.1)*

- A. Timbre
- B. Rhythm
- C. Harmony
- D. Melody

96. In visual art studies students are expected to be able to interact in all of the following exercises EXCEPT one. *(Average) (Skill 13.2)*

- A. Clap out syllabic patterns found in song lyrics
- B. Compare and contrast various art pieces
- C. Recognize related dance vocabulary
- D. Identify and sort pictures organized by shape, size, and color

97. Which is NOT a true statement about crafts? *(Average) (Skill 13.3)*

- A. Students experiment with their own creativity
- B. Products are unique and different
- C. Self-expression is encouraged
- D. Outcome is predetermined

98. **The following is NOT a good activity to encourage fifth graders' artistic creativity: (Average) (Skill 13.3)**
- A. Ask them to make a decorative card for a family member.
 - B. Have them work as a team to decorate a large wall display.
 - C. Ask them to copy a drawing from a book, with the higher grades being awarded to those students who come closest to the model.
 - D. Have each student try to create an outdoor scene with crayons, giving them a choice of scenery.
99. **Creating movements in response to music helps students to connect music and dance in which of the following ways? (Average) (Skill 13.4)**
- A. Rhythm
 - B. Costuming
 - C. Speed
 - D. Vocabulary skills

100. **In the visual arts, works that project a design from the center axis are said to have: (Rigorous) (Skill 13.4)**
- A. Horizontal balance
 - B. Radial balance
 - C. Symmetrical balance
 - D. Asymmetrical balance
101. **Which of the following types and styles of music is described as a large musical work consisting of four movements or sections? (Average) (Skill 14.1)**
- A. Cantata
 - B. Symphony
 - C. Sonata
 - D. Chorale
102. **Local elected officials and guest or resident artists are brought into the classroom to: (Average) (Skill 15.2)**
- A. Explain their jobs or trades
 - B. Observe teaching skills
 - C. Enrich and extend the arts curriculum
 - D. Entertain students and teachers

103. In the area of performing arts, specifically dance, students in primary grades are expected to have a gross understanding of their motor movements. Which of the following movements would NOT be age-appropriate? (Rigorous) (Skill 16.1)

- A. Basic rhythm
- B. Early body awareness
- C. Imagery
- D. Listening skills

104. Which of the following statements indicates an instructional goal for using multimedia in the classroom? (Rigorous) (Skill 16.1)

- A. Audio messages invite the listener to form mental images consistent with the topic of the audio.
- B. Print messages appeal almost exclusively to the mind and push students to read with more thought.
- C. Listening to an audio message is more passive than reading a print message.
- D. Teachers who develop activities to foster a critical perspective on audiovisual presentations will decrease passivity.

105. Improved cardio-respiratory fitness and lower resting heart rate can result from: (Easy) (Skill 17.1)

- A. Rest
- B. Exercise
- C. Diet
- D. Education

106. The components of nutrition are carbohydrates, proteins, fats, vitamins, minerals, and: (Average) (Skill 17.2)

- A. Iron
- B. Water
- C. Salt
- D. Flavor

107. Goal setting should include: (Easy) (Skill 17.3)

- A. Small, short-term steps
- B. Rewards
- C. Realistic planning
- D. All of the above

108. The period of development that includes children learning more complex motor patterns including running, jumping, climbing, and balancing describes which stage of motor development?
(Average) (Skill 18.1)

- A. Stage 1
- B. Stage 2
- C. Stage 3
- D. Stage 4

109. Sitting, crawling, and creeping develop after:
(Rigorous) (Skill 18.1)

- A. Simple reflexes
- B. Late childhood
- C. Climbing
- D. Balancing

110. Activities that enhance team socialization include all of the following EXCEPT:
(Easy) (Skill 18.3)

- A. Basketball
- B. Soccer
- C. Golf
- D. Volleyball

111. Social skills and values developed by activity include all of the following EXCEPT:
(Average) (Skill 18.3)

- A. Winning at all costs
- B. Making judgments in groups
- C. Communicating and cooperating
- D. Respecting rules and property

112. Through physical activities, John has developed self-discipline, fairness, respect for others, and new friends. John has experienced which of the following?
(Rigorous) (Skill 18.3)

- A. Positive cooperation psychosocial influences
- B. Positive group psychosocial influences
- C. Positive individual psychosocial influences
- D. Positive accomplishment psycho-social influences

113. Which of the following psychosocial influences is NOT negative?
(Rigorous) (Skill 18.3)

- A. Avoidance of problems
- B. Adherence to exercise
- C. Ego-centeredness
- D. Role conflict

114. A six-year-old student in Ms. Brack's first-grade class has exhibited a noticeable change in behavior over the last month. The child had been outgoing and alert but she has become quiet and withdrawn, and appears to be unable to concentrate on her work. Yesterday, bruises were evident on the child's arm and right eye. Ms. Brack should: *(Average) (Skill 18.4)*

- A. Ignore the situation
- B. Provide remedial work
- C. Immediately report suspected abuse to the authorities
- D. Call the girl's parents

115. Anabolic steroids, alcohol, and marijuana are all: *(Easy) (Skill 19.1)*

- A. Substances that can be abused
- B. Types of medication
- C. Illegal
- D. Legal

116. The alleged benefit of this substance or these substances is an increase in muscle mass and strength; however, it produces harmful side effects such as premature closure of growth plates in bones. *(Rigorous) (Skill 19.1)*

- A. Cocaine
- B. Alcohol
- C. Nicotine
- D. Steroids

117. The most effective way to promote the physical education curriculum is to: *(Rigorous) (Skill 19.2)*

- A. Relate physical education to higher thought processes
- B. Relate physical education to humanitarianism
- C. Relate physical education to the total educational process
- D. Relate physical education to skills necessary to preserve the natural environment

118. A physical education instructor anticipates and prevents potential injuries, watches for hidden injuries, and takes an injury evaluation of the entire class. Which of the following strategies to prevent injuries is the teacher demonstrating? (Average) (Skill 19.4)

- A. Maintaining hiring standards
- B. Proper use of equipment
- C. Proper procedures for emergencies
- D. Participant screening

119. Injury prevention includes: (Average) (Skill 19.4)

- A. Discipline and conditioning
- B. Standards and education
- C. Participant screening
- D. All of the above

120. Activities of interpreting audio, visual, and tactile stimuli are: (Rigorous) (Skill 20.1)

- A. Reflex movements
- B. Perceptual abilities
- C. Locomotor movements
- D. Skilled movements

121. A physical education teacher emphasizes healthy attitudes and habits. She conducts her classes so that students acquire and interpret knowledge and learn to think/analyze, which is necessary for physical activities. The goals and values utilized and the philosophy applied by this instructor are: (Rigorous) (Skill 20.1)

- A. Physical development goals and realism philosophy
- B. Affective development goals and existentialism
- C. Motor development goals and realism philosophy
- D. Cognitive development goals and idealism philosophy

122. When planning physical education activities teachers should consider: (Easy) (Skill 20.2)

- A. Availability and cost of equipment
- B. Student safety
- C. Community resources
- D. All of the above

123. A student's motor development is influenced by:
(Easy) (Skill 20.3)

- A. Culture
- B. Environment
- C. Family
- D. All of the above

SCIENCE AND TECHNOLOGY

124. The volume of a solid object is:
(Easy) (Skill 21.1)

- A. The area of the faces excluding the bases
- B. The total area of all of the faces including the bases
- C. The number of cubic units in a solid
- D. The measure around the object

125. The measure of the pull of the Earth's gravity on an object is called _____.
(Average) (Skill 21.1)

- A. Mass number
- B. Atomic number
- C. Mass
- D. Weight

126. The following are examples of chemical reactions EXCEPT:
(Average) (Skill 21.2)

- A. Melting ice into water
- B. Dissolving a seltzer tablet in water
- C. Using a firecracker
- D. Burning a piece of plastic

127. Which parts of an atom are located inside the nucleus?
(Average) (Skill 21.6)

- A. Electrons and neutrons
- B. Protons and neutrons
- C. Protons only
- D. Neutrons only

128. Which atomic particles have a positive charge?
(Easy) (Skill 21.6)

- A. Electrons
- B. Protons
- C. Neutrons
- D. Nucleus

129. In the following equation, what does G represent?
(Rigorous) (Skill 22.2)

$$F_{\text{gravity}} = G \frac{m_1 m_2}{d^2}$$

- A. The distance between the two masses
 - B. The universal gravitational constant
 - C. Coulomb's constant
 - D. The speed of the object
130. The theory of seafloor spreading explains _____.
(Rigorous) (Skill 23.1)
- A. The shapes of the continents
 - B. How continents got named
 - C. How continents move apart
 - D. How continents sink to become part of the ocean floor
131. Which of the following types of rock are made from magma?
(Rigorous) (Skill 23.3)
- A. Fossils
 - B. Sedimentary
 - C. Metamorphic
 - D. Igneous

132. What is the most accurate description of the water cycle?
(Rigorous) (Skill 23.4)

- A. Rain comes from clouds, filling the ocean. The water then evaporates and becomes clouds again.
 - B. Water circulates from rivers into groundwater and back, while water vapor circulates in the atmosphere.
 - C. Water is conserved and, except for chemical or nuclear reactions, any drop of water could circulate through clouds, rain, groundwater, and surface water.
 - D. Weather systems cause chemical reactions to break water into its atoms.
133. The transfer of heat by electromagnetic waves is called _____.
(Rigorous) (Skill 23.5)
- A. Conduction
 - B. Convection
 - C. Phase change
 - D. Radiation

134. Which of the following is the best definition of *meteorite*?
(Rigorous) (Skill 23.6)

- A. A meteorite is a mineral composed of mica and feldspar.
- B. A meteorite is material from outer space that has struck the Earth's surface
- C. A meteorite is an element that has properties of both metals and nonmetals.
- D. A meteorite is a very small unit of length measurement.

135. The most abundant gas in the atmosphere is:
(Rigorous) (Skill 23.6)

- A. Oxygen
- B. Nitrogen
- C. Carbon dioxide
- D. Methane

136. All of the following are natural resources EXCEPT:
(Average) (Skill 23.10)

- A. Trees
- B. Coal
- C. Fish
- D. Paper

137. Which kingdom comprises organisms made of one cell with no nuclear membrane?
(Rigorous) (Skill 24.2)

- A. Monera
- B. Protista
- C. Fungi
- D. Algae

138. What cell organelle contains the cell's stored food?
(Average) (Skill 24.3)

- A. Vacuoles
- B. Golgi apparatus
- C. Ribosomes
- D. Lysosomes

139. The peripheral nervous system consists of:
(Average) (Skill 24.6)

- A. Nerves
- B. Large organs
- C. The eyes
- D. None of the above

140. Enzymes speed up reactions by _____ .
(Rigorous) (Skill 24.6)
- A. Utilizing ATP
 - B. Lowering pH, allowing reaction speed to increase
 - C. Increasing volume of substrate
 - D. Lowering energy of activation
141. _____ is a tough band of fibrous connective tissue that connects muscle to bone or muscle to muscle.
(Rigorous) (Skill 24.6)
- A. A joint
 - B. A tendon
 - C. A ligament
 - D. Cartilage
142. Identify the correct sequence of organization of living things from lower to higher order:
(Rigorous) (Skill 24.8)
- A. Cell, organelle, organ, tissue, system, organism
 - B. Cell, tissue, organ, organelle, system, organism
 - C. Organelle, cell, tissue, organ, system, organism
 - D. Organelle, tissue, cell, organ, system, organism

143. Which of the following is a correct explanation of evolution?
(Rigorous) (Skill 24.9)
- A. Giraffes need to reach higher for leaves to eat so their necks stretch. The giraffe babies are then born with longer necks. Eventually, there are more long-necked giraffes in the population.
 - B. Giraffes with longer necks are able to reach more leaves, so they eat more and have more babies than other giraffes. Eventually, there are more long-necked giraffes in the population.
 - C. Giraffes want to reach higher for leaves to eat, so they release enzymes into their bloodstream, which in turn causes fetal development of longer-necked giraffes. Eventually, there are more long-necked giraffes in the population.
 - D. Giraffes with long necks are more attractive to other giraffes, so they get the best mating partners and have more babies. Eventually, there are more long-necked giraffes in the population.

144. What is the scientific method?
(Average) (Skill 25.1)

- A. The process of doing an experiment and writing a laboratory report
- B. The process of using open inquiry and repeatable results to establish theories
- C. The process of reinforcing scientific principles by confirming results
- D. The process of recording data and observations

145. Which of the following is NOT considered ethical behavior for a scientist?
(Average) (Skill 25.1)

- A. Using unpublished data and citing the source
- B. Publishing data before other scientists have had a chance to replicate results
- C. Collaborating with other scientists from different laboratories
- D. Publishing work with an incomplete list of citations

146. In an experiment measuring the growth of bacteria at different temperatures, what is the independent variable?
(Rigorous) (Skill 25.1)

- A. Number of bacteria
- B. Growth rate of bacteria
- C. Temperature
- D. Size of bacteria

147. Which is the correct order of methodology?
(Average) (Skill 25.2)

1. Collecting data
2. Planning a controlled experiment
3. Drawing a conclusion
4. Hypothesizing a result
5. Revisiting a hypothesis to answer a question

- A. 1, 2, 3, 4, 5
- B. 4, 2, 1, 3, 5
- C. 4, 5, 1, 3, 2
- D. 1, 3, 4, 5, 2

148. Which of the following data sets is properly represented by a bar graph?
(Average) (Skill 25.2)

- A. Number of people choosing to buy cars versus color of car bought
- B. Number of people choosing to buy cars versus age of car customer
- C. Number of people choosing to buy cars versus distance from car lot to customer home
- D. Number of people choosing to buy cars versus time since last car purchase

149. Chemicals should be stored:
(Easy) (Skill 25.4)

- A. In the principal's office
- B. In a dark room
- C. According to their reactivity with other substances
- D. In a double-locked room

150. Accepted procedures include preparing solutions with _____.
(Rigorous) (Skill 25.4)

- A. Alcohol
- B. Hydrochloric acid
- C. Distilled water
- D. Tap water

151. Issues such as cloning and genetic engineering fall in the area of:
(Average) (Skill 26.1)

- A. Biology
- B. Technology
- C. Chemistry
- D. Biotechnology

152. Bunsen burners, graphing calculators, computers, and multimedia are examples of:
(Average) (Skill 26.1)

- A. Technology used in science
- B. No specific grouping
- C. Items used only in high school programs
- D. All of the above

153. Which of the following is controlled by the researcher?
(Average) (Skill 26.2)

- A. An independent variable
- B. A dependent variable
- C. A control
- D. A live specimen

MATHEMATICS

154. An item that sells for \$375.00 is put on sale at \$120.00. What is the percentage of decrease?
(Average) (Skill 28.3)
- A. 25%
 - B. 28%
 - C. 68%
 - D. 34%
155. A sofa sells for \$520.00. If the retailer makes a 30% profit, what was the wholesale price?
(Average) (Skill 28.3)
- A. \$400.00
 - B. \$676.00
 - C. \$490.00
 - D. \$364.00
156. In similar polygons, if the perimeters are in a ratio of $x:y$, the sides are in a ratio of:
(Average) (Skill 28.3)
- A. $x:y$
 - B. $x^2:y^2$
 - C. $2x:y$
 - D. $\frac{1}{2} x:y$

157. Choose the set in which the members are not equivalent.
(Average) (Skill 28.4)
- A. $\frac{1}{2}$, 0.5, 50%
 - B. $\frac{10}{5}$, 2.0, 200%
 - C. $\frac{3}{8}$, 0.385, 38.5%
 - D. $\frac{7}{10}$, 0.7, 70%
158. 0.16 is equivalent to:
(Average) (Skill 28.4)
- A. 16
 - B. 16%
 - C. $\frac{16}{10}$
 - D. 1.6
159. Which of the following is an irrational number?
(Rigorous) (Skill 28.4)
- A. .362626262...
 - B. $4^{\frac{1}{3}}$
 - C. $\sqrt{5}$
 - D. $-\sqrt{16}$

160. The number 0 is a member of all of the following groups of numbers EXCEPT:
(Rigorous) (Skill 28.4)

- A. Whole numbers
- B. Real numbers
- C. Natural numbers
- D. Integers

161. $\left(\frac{-4}{9}\right) + \left(\frac{-7}{10}\right) =$
(Easy) (Skill 28.5)

- A. $\frac{23}{90}$
- B. $\frac{-23}{90}$
- C. $\frac{103}{90}$
- D. $\frac{-103}{90}$

162. Look at this number: 4,087,361
What number represents the ten-thousands place?
(Easy) (Skill 28.5)

- A. 4
- B. 6
- C. 0
- D. 8

163. The correct order of mathematical operations is the following:
(Average) (Skill 28.5)

- A. Simplify inside grouping characters such as parentheses, brackets, square roots, fraction bars, etc.; multiply expressions with exponents; do multiplication or division, from left to right; do addition or subtraction, from left to right.
- B. Do multiplication or division, from left to right; simplify inside grouping characters such as parentheses, brackets, square roots, fraction bars, etc.; multiply expressions with exponents; do addition or subtraction, from left to right.
- C. Simplify inside grouping characters such as parentheses, brackets, square roots, fraction bars, etc.; do addition or subtraction, from left to right; multiply expressions with exponents; do multiplication or division, from left to right.
- D. None of the above.

164. Given even numbers x and y , which could be the least common multiple of x and y ?
(Rigorous) (Skill 28.5)

- A. $xy/2$
- B. $2xy$
- C. $4xy$
- D. xy

165. $(5.6) \times (-0.11) =$
(Average) (Skill 28.6)

- A. -0.616
- B. 0.616
- C. -6.110
- D. 6.110

166. Solve for x : $|2x + 3| > 4$
(Rigorous) (Skill 28.6)

- A. $-\frac{7}{2} > x > \frac{1}{2}$
- B. $-\frac{1}{2} > x > \frac{7}{2}$
- C. $x < \frac{7}{2}$ or $x < -\frac{1}{2}$
- D. $x < -\frac{7}{2}$ or $x > \frac{1}{2}$

167. What is the greatest common factor of 16, 28, and 36?
(Easy) (Skill 28.7)

- A. 2
- B. 4
- C. 8
- D. 16

168. Which set illustrates a function?
(Average) (Skill 28.8)

- A. $\{(0,1) (0, 2) (0, 3) (0, 4) \}$
- B. $\{(3, 9) (-3, 9) (4,16) (-4, 16)\}$
- C. $\{(1, 2) (2, 3) (3, 4) (1, 4) \}$
- D. $\{(2, 4) (3, 6) (4, 8) (4, 16) \}$

169. _____ lines do NOT intersect.
(Easy) (Skill 29.1)

- A. Perpendicular
- B. Parallel
- C. Intersecting
- D. Skew

170. _____ lines intersect at right angles to each other.
(Easy) (Skill 29.1)

- A. Perpendicular
- B. Parallel
- C. Intersecting
- D. Skew

171. All of the following are examples of obtuse angles EXCEPT:
(Average) (Skill 29.1)

- A. 110 degrees
- B. 90 degrees
- C. 135 degrees
- D. 91 degrees

172. Which angle would measure less than 90 degrees?
(Average) (Skill 29.1)

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

173. Find the area of a rectangle if you know that the base is 8 cm and the diagonal of the rectangle is 8.5 cm:
(Rigorous) (Skill 29.1)

- A. 24 cm²
- B. 30 cm²
- C. 18.9 cm²
- D. 24 cm

174. If the radius of a right circular cylinder is doubled, how does its volume change?
(Rigorous) (Skill 29.2)

- A. No change
- B. Also doubles
- C. Four times the original
- D. Pi times the original

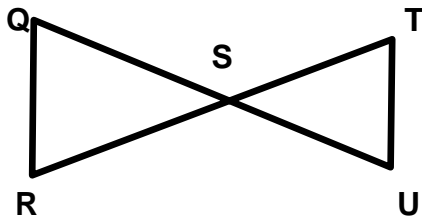
175. If a right triangle has legs with the measurements of 3 cm and 4 cm, what is the measure of the hypotenuse?
(Average) (Skill 29.3)

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

176. Find the midpoint of (2, 5) and (7, -4).
(Average) (Skill 29.3)

- A. (9, -1)
- B. (5, 9)
- C. (9/2, -1/2)
- D. (9/2, 1/2)

177. Given $QS \cong TS$ and $RS \cong US$, prove $\triangle QRS \cong \triangle TUS$.
(Rigorous) (Skill 29.3)



- | | |
|--|----------|
| 1) $QS \cong TS$ | 1) Given |
| 2) $RS \cong US$ | 2) Given |
| 3) $\angle TSU \cong \angle QSR$ | 3) ? |
| 4) $\triangle TSU \cong \triangle QSR$ | 4) SAS |

Give the reason that justifies step 3.

- A. Congruent parts of congruent triangles are congruent
- B. Reflexive axiom of equality
- C. Alternate interior angle theorem
- D. Vertical angle theorem

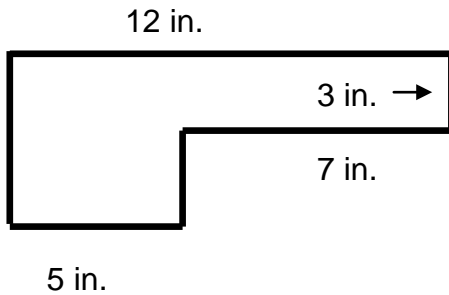
178. Given segment AC, with B as its midpoint, find the coordinates of C if A = (5, 7) and B = (3, 6.5).
(Rigorous) (Skill 29.4)

- A. (4, 6.5)
- B. (1, 6)
- C. (2, 0.5)
- D. (16, 1)

179. Three-dimensional figures in geometry are called:
(Easy) (Skill 29.6)

- A. Solids
- B. Cubes
- C. Polygons
- D. Blocks

180. Find the area of the figure below.
(Rigorous) (Skill 29.7)



- A. 56 in.^2
 B. 27 in.^2
 C. 71 in.^2
 D. 170 in.^2
181. What is the area of a square whose side is 13 feet?
(Rigorous) (Skill 29.8)
- A. 169 feet
 B. 169 square feet
 C. 52 feet
 D. 52 square feet

182. What measure could be used to report the distance traveled in walking around a track?
(Easy) (Skill 29.10)

- A. Degrees
 B. Square meters
 C. Kilometers
 D. Cubic feet

183. The mass of a cookie is closest to:
(Easy) (Skill 29.10)

- A. 0.5 kg
 B. 0.5 grams
 C. 15 grams
 D. 1.5 grams

184. A boat travels 30 miles upstream in three hours. It makes the return trip in one and a half hours. What is the speed of the boat in still water?
(Average) (Skill 30.1)

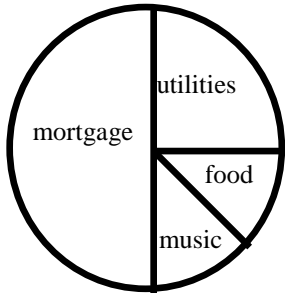
- A. 10 mph
 B. 15 mph
 C. 20 mph
 D. 30 mph

185. Given the formula $d = rt$, (where $d =$ distance, $r =$ rate, and $t =$ time), calculate the amount of time required for a vehicle to travel 585 miles at a rate of 65 miles per hour.
(Average) (Skill 30.1)
- A. 8.5 hours
B. 6.5 hours
C. 9.5 hours
D. 9 hours
186. Two mathematics classes have a total of 410 students. The 8:00 a.m. class has 40 more than the 10:00 a.m. class. How many students are in the 10:00 a.m. class?
(Average) (Skill 30.4)
- A. 123.3
B. 370
C. 185
D. 330
187. Solve for both x and y :
 $3x + 2y = 12$
 $12x + 8y = 15$
(Rigorous) (Skill 30.4)
- A. All real numbers
B. $x = 4, y = 4$
C. $x = 2, y = -1$
D. \emptyset
188. What is the absolute value of the number -5?
(Rigorous) (Skill 30.4)
- A. -5
B. 10
C. $1/5$
D. 5
189. Which of the following is an example of the associative property?
(Average) (Skill 30.5)
- A. $a(b + c) = ab + bc$
B. $a + 0 = a$
C. $(a + b) + c = a + (b + c)$
D. $a + b = b + a$
190. Find the median of the following set of data:
(Easy)(Skill 31.1)
- 14 3 7 6 11 20
- A. 9
B. 8.5
C. 7
D. 11

191. Corporate salaries are listed for several employees. Which would be the best measure of central tendency?
(Average) (Skill 31.1)

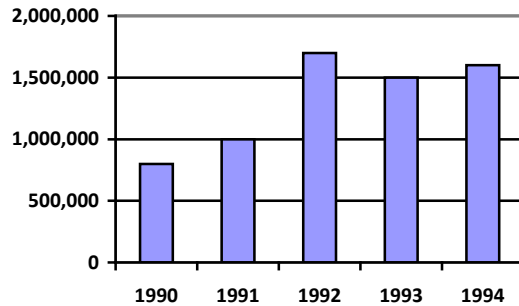
\$24,000 \$24,000 \$26,000
\$28,000 \$30,000 \$120,000

- A. Mean
B. Median
C. Mode
D. No difference
192. Which statement is true about George's budget?
(Easy) (Skill 31.2)



- A. George spends the greatest portion of his income on food
B. George spends twice as much on utilities as he does on his mortgage
C. George spends twice as much on utilities as he does on food
D. George spends the same amount on food and utilities as he does on mortgage

193. The following chart shows the yearly average number of international tourists visiting Palm Beach for 1990-1994. How many more international tourists visited Palm Beach in 1994 than in 1991?
(Rigorous) (Skill 31.2)



- A. 100,000
B. 600,000
C. 1,600,000
D. 8,000,000
194. In probability, the sample space represents:
(Average) (Skill 31.3)
- A. An outcome to an experiment
B. All possible outcomes of an experiment
C. The amount of times you must flip a coin
D. The amount of room needed to conduct an experiment

195. What is the probability of drawing two consecutive aces from a standard deck of cards? *(Rigorous) (Skill 31.3)*

A. $\frac{3}{51}$

B. $\frac{1}{221}$

C. $\frac{2}{104}$

D. $\frac{2}{52}$

196. Given a drawer with five black socks, three blue socks, and two red socks, what is the probability that you will draw two black socks in two drawers in a dark room? *(Rigorous) (Skill 31.3)*

A. $\frac{2}{9}$

B. $\frac{1}{4}$

C. $\frac{17}{18}$

D. $\frac{1}{18}$

197. What is NOT one of the advantages of collaborative or cooperative learning? *(Average) (Skill 32.1)*

A. Students who work together in groups or teams develop their skills in organizing, leadership, research, communication, and problem solving.

B. Working in teams can help students overcome anxiety in distance learning courses and contribute a sense of community and belonging for the students.

C. Students tend to learn more material and retain the information longer than when the same information is taught using different methods.

D. Teachers reduce their workloads and the amount of time spent on individuals, assignments, and grading.

198. Alternative assessment in math may include: *(Rigorous) (Skill 32.1)*

A. Student explanation of reasoning behind the answer

B. Analysis of data

C. Multimedia

D. All of the above

**199. Why are manipulatives, models, and technology used by math teachers?
(Rigorous) (Skill 32.2)**

- A. To promote interest
- B. To address diverse learning needs
- C. To give hands-on math experience
- D. All of the above

**200. Open-ended questions, portfolios, and writing activities can:
(Rigorous) (Skill 32.3)**

- A. Only be used in early childhood assessment
- B. Be used as assessment of mathematical skill and knowledge
- C. Only be used for language arts assessment
- D. None of the above

TEACHER CERTIFICATION STUDY GUIDE

Answer Key

1. A	41. A	81. C	121. D	161. D
2. D	42. B	82. B	122. D	162. D
3. B	43. B	83. A	123. D	163. A
4. B	44. D	84. B	124. C	164. A
5. A	45. A	85. C	125. D	165. A
6. D	46. C	86. C	126. A	166. D
7. B	47. A	87. C	127. B	167. B
8. D	48. D	88. B	128. B	168. B
9. B	49. D	89. C	129. B	169. B
10. A	50. D	90. A	130. C	170. A
11. D	51. C	91. A	131. D	171. B
12. C	52. D	92. C	132. C	172. A
13. C	53. D	93. D	133. D	173. A
14. D	54. D	94. C	134. B	174. C
15. C	55. B	95. A	135. B	175. D
16. B	56. D	96. C	136. D	176. D
17. C	57. A	97. D	137. A	177. D
18. B	58. A	98. C	138. A	178. B
19. A	59. A	99. A	139. A	179. A
20. C	60. B	100. B	140. D	180. A
21. C	61. C	101. B	141. B	181. B
22. D	62. A	102. C	142. C	182. C
23. B	63. B	103. C	143. B	183. C
24. D	64. B	104. D	144. B	184. B
25. A	65. C	105. B	145. D	185. D
26. A	66. A	106. B	146. C	186. C
27. B	67. C	107. D	147. B	187. D
28. D	68. B	108. B	148. A	188. D
29. A	69. B	109. A	149. C	189. C
30. D	70. D	110. C	150. C	190. A
31. D	71. D	111. A	151. D	191. B
32. D	72. D	112. B	152. A	192. C
33. C	73. C	113. B	153. A	193. B
34. B	74. D	114. C	154. C	194. B
35. A	75. A	115. A	155. A	195. B
36. C	76. A	116. D	156. A	196. A
37. C	77. B	117. C	157. C	197. D
38. B	78. C	118. D	158. B	198. D
39. A	79. A	119. D	159. C	199. D
40. B	80. B	120. B	160. C	200. B

TEACHER CERTIFICATION STUDY GUIDE

Rigor Table

	Easy 20%	Average Rigor 40%	Rigorous 40%
Question	3, 4, 12, 13, 22, 25, 29, 33, 34, 39, 44, 50, 56, 61, 62, 63, 70, 79, 81, 82, 85, 89, 105, 107, 110, 115, 122, 123, 124, 128, 149, 161, 162, 167, 169, 170, 179, 182, 183, 190, 192	1, 2, 5, 9, 14, 18, 23, 24, 26, 27, 30, 31, 35, 36, 46, 47, 48, 49, 51, 55, 58, 59, 64, 65, 71, 72, 74, 76, 80, 84, 86, 90, 91, 92, 94, 95, 96, 97, 98, 99, 101, 102, 106, 108, 111, 114, 118, 119, 125, 126, 127, 136, 138, 139, 144, 145, 147, 148, 151, 152, 153, 154, 155, 156, 157, 158, 163 165, 168, 171, 172, 175, 176, 184, 185, 186, 189, 191, 194, 197,	6, 7, 8, 10, 11, 15, 16, 17, 19, 20, 21, 28, 32, 37, 38, 40, 41, 42, 43, 45, 52, 53, 54, 57, 60, 66, 67, 68, 69, 73, 75, 77, 78, 83, 87, 88, 93, 100, 103, 104, 109, 112, 113, 116, 117, 120, 121, 129, 130, 131, 132, 133, 134, 135, 137, 140, 141, 142, 143, 146, 150, 159, 160, 164, 166, 173, 174, 177, 178, 180, 181, 187, 188, 193, 195, 196, 198, 199, 200

FTCE Elementary Education K-6 Sample Test with Rationales

LANGUAGE ARTS AND READING

1. All of the following are true about phonological awareness EXCEPT:
(Average) (Skills 1.1, 2.1)
- A. It may involve print.
 - B. It is a prerequisite for spelling and phonics.
 - C. Activities can be done by the children with their eyes closed.
 - D. It starts before letter recognition is taught.

Answer: A. It may involve print

The key word here is *except*, which will be highlighted in uppercase on the test as well. All of the choices are true about phonological awareness except the first one, A, because phonological awareness does not involve print.

2. The arrangement and relationship of words in sentences or sentence structure best describes:
(Average) (Skill 1.1)
- A. Style
 - B. Discourse
 - C. Thesis
 - D. Syntax

Answer: D. Syntax

Syntax is the grammatical structure of sentences.

3. To decode is to:
(Easy) (Skill 1.2)

- A. Construct meaning
- B. Sound out a printed sequence of letters
- C. Use a special code to decipher a message
- D. None of the above

Answer: B. Sound out a printed sequence of letters

To decode means to change communication signals into messages. Reading comprehension requires that the reader learn the code in which a message is written and be able to decode it to get the message.

4. To encode means that you:
(Easy) (Skill 1.2)

- A. Decode a second time
- B. Construct meaning from a code
- C. Tell someone a message
- D. None of the above

Answer: B. Construct meaning from a code

Encoding involves changing a message into symbols. An example of encoding is encoding oral language into writing (spelling).

5. Which of the following indicates that a student is a fluent reader?
(Average) (Skill 1.3)

- A. Reads texts with expression or prosody
- B. Reads word to word and haltingly
- C. Must intentionally decode a majority of the words
- D. In a writing assignment, sentences are poorly organized structurally

Answer: A. Reads texts with expression or prosody

The teacher should listen to the children read aloud, but there are also clues to reading levels in their writing.

6. Which of the following reading strategies is NOT associated with fluent reading abilities?
(Rigorous) (Skill 1.3)

- A. Pronouncing unfamiliar words by finding similarities with familiar words
- B. Establishing a purpose for reading
- C. Formulating questions about the text while reading
- D. Reading sentences word by word

Answer: D. Reading sentences word by word

Pronouncing unfamiliar words by finding similarities with familiar words, establishing a purpose for reading, and formulating questions about the text while reading are all excellent strategies fluent readers use to enhance their comprehension of a text. Reading sentences word by word is a trait of a nonfluent reader as it inhibits comprehension because the reader is focused on each word by itself rather than the meaning of the whole sentence and how it fits into the text.

7. Orthography is:
(Rigorous) (Skill 1.3)

- A. The study of word structure
- B. A method of representing a spoken language through the use of written symbols
- C. The complete set of related word forms associated with a given lexeme
- D. A process of word formation that involves combining complete word forms into a single compound form

Answer: B. A method of representing a spoken language through the use of written symbols

By definition, orthography is using written symbols to represent spoken language.

8. Which word in the following sentence is a bound morpheme?
“The quick brown fox jumped over the lazy dog.”
(Rigorous) (Skill 1.5)

- A. The
- B. Fox
- C. Lazy
- D. Jumped

Answer: D. Jumped

The suffix *-ed* is an affix that cannot stand alone as a unit of meaning. Thus it is bound to the free morpheme *jump*. *The* is always an unbound morpheme since no suffix or prefix can alter its meaning. As written, *fox* and *lazy* are unbound but their meaning is changed with affixes, for example, *foxes* or *laziness*.

9. A teacher has taught his students several strategies to monitor their reading comprehension. These strategies include identifying where in the passage they are having difficulty, identifying what the difficulty is, and restating the difficult sentence or passage in their own words. These strategies are examples of:
(Average) (Skill 1.6)

- A. Graphic and semantic organizers
- B. Metacognition
- C. Recognizing story structure
- D. Summarizing

Answer: B. Metacognition

Metacognition can be defined as “thinking about thinking.” Good readers use metacognitive strategies to think about and have control over their reading. Before reading, they might clarify their purpose for reading and preview the text. During reading, they might monitor their understanding, adjusting their reading speed to fit the difficulty of the text and fixing any comprehension problems they have. After reading, they check their understanding of what they have read.

10. Which of the following is an untrue statement about a theme in literature?
(Rigorous) (Skill 1.6)

- A. The theme is always stated directly somewhere in the text.
- B. The theme is the central idea in a literary work.
- C. All parts of the work (plot, setting, mood) should contribute to the theme in some way.
- D. By analyzing the various elements of the work, the reader should be able to arrive at an indirectly stated theme.

Answer: A. The theme is always stated directly somewhere in the text.

The theme may be stated directly, but it can also be implicit in various aspects of the work, such as the interaction between characters, symbolism, or description.

11. To explore the relationship of literature to modern life, which of these activities would NOT enable students to explore comparable themes?
(Rigorous) (Skill 1.6)

- A. After studying various world events, such as the Palestinian-Israeli conflict, students write an updated version of *Romeo and Juliet* using modern characters and settings
- B. Before studying *Romeo and Juliet*, students watch the movie *West Side Story*
- C. Students research the major themes of *Romeo and Juliet* by studying news stories and finding modern counterparts for the story
- D. Students explore and compare the romantic themes of *Romeo and Juliet* and *The Taming of the Shrew*

Answer: D. Students explore and compare the romantic themes of *Romeo and Juliet* and *The Taming of the Shrew*

By comparing the two plays by Shakespeare, students will be focusing on the culture of the period in which the plays were written. In choice A, students should be able to recognize modern parallels with current culture clashes. By comparing *Romeo and Juliet* to *West Side Story*, set in the 1950s, students can study how themes are similar in two completely different historical periods. In choice C, students can study local, national, and international news for comparable stories and themes.

12. Which of the following is an opinion?
(Easy) (Skill 1.7)

- A. The sky is blue.
- B. Albany is the capital of New York State.
- C. A dog is the best pet to have.
- D. Humans breathe.

Answer: C. A dog is the best pet to have.

An opinion is a subjective evaluation based on personal bias.

13. Which of the following is a fact?
(Easy) (Skill 1.7)

- A. It's going to rain.
- B. John is a liar.
- C. Joe said he believes John is a liar.
- D. The world is going to the dogs.

Answer: C. Joe said he believes John is a liar.

It's a fact that he said it, even though what he said may not be a fact.

14. Which of the following reading strategies calls for higher-order cognitive skills?
(Average) (Skill 1.7)

- A. Making predictions
- B. Summarizing
- C. Monitoring
- D. Making inferences

Answer: D. Making inferences

Making inferences from reading a text involves using other reading skills such as making predictions, skimming, scanning, summarizing, then coming to conclusions or making inferences about things that are not directly stated in the text.

15. Which is NOT a true statement concerning an author's literary tone?
(Rigorous) (Skill 1.7)

- A. Tone is partly revealed through the selection of details.
- B. Tone is the expression of the author's attitude toward his/her subject.
- C. Tone in literature is usually satiric or angry.
- D. Tone in literature corresponds to the tone of voice a speaker uses.

Answer: C. Tone in literature is usually satiric or angry.

Tone in literature conveys a mood and can be as varied as the tone of voice of a speaker.

16. Which of the following should NOT be included in the opening paragraph of an informative essay?
(Rigorous) (Skill 1.7)

- A. Thesis sentence
- B. Details and examples supporting the main idea
- C. A broad general introduction to the topic
- D. A style and tone that grabs the reader's attention

Answer: B. Details and examples supporting the main idea

The introductory paragraph should introduce the topic, capture the reader's interest, state the thesis, and prepare the reader for the main points in the essay. Details and examples, however, should be provided in the second part of the essay to help develop the thesis presented at the end of the introductory paragraph.

17. “The use of steroids in professional baseball is ruining the sport.” Which of the following statements does NOT support this thesis?
(Rigorous) (Skill 1.7)

- A. Steroids are performance enhancers and give players who take them an unfair advantage.
- B. Steroids are physically harmful to the players.
- C. Steroids make baseball more exciting because more players hit home runs.
- D. Kids in high school and college are taking steroids because they want to give themselves a better shot to make it into the major leagues.

Answer: C. Steroids make baseball more exciting because more players hit home runs.

The thesis speaks negatively about steroids in the sport of baseball, while choice C is a positive statement about steroids. Because of this, choice C does not support the thesis.

18. Which is NOT listed as a common difficulty in early childhood literacy programs?
(Average) (Skill 1.11)

- A. Difficulty maintaining concentration
- B. Large-group cooperation with peers
- C. Frustration understanding text
- D. Limited vocabulary

Answer: B. Large-group cooperation with peers

Although cooperation in a large group may be problematic for some early childhood activities, it is not listed as a common problem in learning literacy. The other choices can cause difficulty for the early childhood literacy learner.

19. If a student uses inappropriate language that includes slang and expletives, what is the best course of action to take in order to influence the student's formal communication skills?

(Rigorous) (Skill 1.11)

- A. Ask the student to paraphrase the writing, that is, translate it into language appropriate for the school principal to read.
- B. Refuse to read the student's papers until he/she conforms to a more literate style.
- C. Ask the student to read his/her work aloud to the class for peer evaluation.
- D. Rewrite the flagrant passages to show the student the right form of expression.

Answer: A. Ask the student to paraphrase the writing, that is, translate it into language appropriate for the school principal to read.

Asking the student to write for a specific audience will help the student become more involved in his/her writing. If the student continues writing to the same audience—the teacher—he/she will continue seeing writing as just another assignment and will not apply grammar, vocabulary, and syntax properly. By paraphrasing his/her own writing, the student will learn to write for a different audience.

20. Which of the following is NOT one of the metalinguistic abilities acquired by children from early involvement in reading activities?

(Rigorous) (Skill 1.11)

- A. Conventions of print
- B. Word consciousness
- C. Spelling fluency
- D. Functions of print

Answer: C. Spelling fluency

Conventions of print, word consciousness, and functions of print are all learned from children's early involvement with reading. Spelling fluency is learned a little later on in reading and a fluent speller is often good at reading comprehension.

21. Which of the following is NOT a strategy of teaching reading comprehension?

(Rigorous) (Skill 1.11)

- A. Summarization
- B. Utilizing graphic organizers
- C. Manipulating sounds
- D. Having students generate questions

Answer: C. Manipulating sounds

Comprehension simply means that the reader can ascribe meaning to text. Teachers can use many strategies to teach comprehension, including questioning, asking students to paraphrase or summarize, utilizing graphic organizers, and focusing on mental images.

22. Which of the following is NOT a characteristic of a fable?

(Easy) (Skill 2.1)

- A. Animals that feel and talk like humans
- B. Happy solutions to human dilemmas
- C. Teaches a moral or standard for behavior
- D. Illustrates specific people or groups without directly naming them

Answer: D. Illustrates specific people or groups without directly naming them

A fable is a short tale with animals, humans, gods, or even inanimate objects as characters. Fables often conclude with a moral, delivered in the form of an epigram (a short, witty, and ingenious statement in verse).

23. The children's literature genre came into its own in the:
(Average) (Skill 2.1)

- A. Seventeenth century
- B. Eighteenth century
- C. Nineteenth century
- D. Twentieth century

Answer: B. Eighteenth century

In the eighteenth century, authors and works such as Jean de La Fontaine and his *Fables*, Pierre Perrault's *Tales*, Madame d'Aulnoye's novels based on old folktales, and Madame de Beaumont's *Beauty and the Beast* all created a children's literature genre. In England, Perrault's work was translated and a work allegedly written by Oliver Smith, *The Renowned History of Little Goody Two Shoes*, also helped to establish the genre.

24. Which of the following is an example of nonfiction literature?
(Average) (Skill 2.1)

- A. Letters
- B. Biographies
- C. Journals
- D. All of the above

Answer: D. All of the above

All of these are examples of nonfiction literature. Fiction is a made-up story; nonfiction relies on facts and data.

25. A simile is:

(Easy) (Skill 2.2)

- A. A direct comparison between two things
- B. An indirect comparison between two things
- C. When human characteristics are applied to things that are not human, such as animals
- D. Deliberate exaggeration for effect or comic effect

Answer: A. A direct comparison between two things

A simile commonly uses the words *like* or *as* to make the comparison; for example, “The boy was as red as a lobster.” A metaphor is an indirect comparison, as in, “The boy was lobster-faced.” Personification is when human characteristics are applied to things that are not human, as in, “The lobster laughed when he skedaddled away.” A hyperbole is a deliberate exaggeration, as in, “We laughed our heads off at that sight.”

26. Which of the following is an example of alliteration?

(Average) (Skill 2.2)

- A. “The City’s voice itself is soft like Solitude.”
- B. “Both in one faith unanimous; though sad”
- C. “By all their country’s wishes blest!”
- D. “In earliest Greece to these with partial choice.”

Answer: A. “The City’s voice itself is soft like Solitude.”

Alliteration is the repetition of consonant sounds in two or more neighboring words or syllables, usually the beginning sound but not always. This line from Shelley’s *Stanzas Written in Dejection Near Naples* is an especially effective use of alliteration using the sibilant *s* not only at the beginning of words but also within words. Alliteration usually appears in prosody; however, effective use of alliteration can be found in other genres.

27. The literary device of personification is used in which example below?
(Average) (Skill 2.2)

- A. “Beg me no beggary by soul or parents, whining dog!”
- B. “Happiness sped through the halls cajoling as it went.”
- C. “O wind thy horn, thou proud fellow.”
- D. “And that one talent which is death to hide.”

Answer: B. “Happiness sped through the halls cajoling as it went.”

“Happiness,” an abstract concept, is described as if it were a person with the words *sped* and *cajoling*.

28. What syntactic device is most evident in Abraham Lincoln’s “Gettysburg Address”?
(Rigorous) (Skill 2.2)

It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth.

- A. Affective connotation
- B. Informative denotations
- C. Allusion
- D. Parallelism

Answer: D. Parallelism

Parallelism is the repetition of grammatical structure. In speeches such as this, as well as the speeches of Martin Luther King, Jr., parallel structure creates a rhythm and balance of related ideas. Lincoln’s repetition of clauses beginning with *that* ties four examples back to “the great task.” Connotation is the emotional attachment of words; denotation is the literal meaning of words. Allusion is a reference to a historic event, person, or place.

29. When selecting multicultural literature, it is most important that the culture be portrayed:
(Easy) (Skill 2.3)

- A. Accurately
- B. In a fun manner
- C. In all genres
- D. With regards to music and the arts

Answer: A. Accurately

The most important aspect of multicultural literature is that it is a true representation of the culture.

30. Which of the following is NOT a technique of prewriting?
(Average) (Skill 3.1)

- A. Clustering
- B. Listing
- C. Brainstorming
- D. Proofreading

Answer: D. Proofreading

Proofreading cannot be a method of prewriting since it is done on texts that have already been written.

31. Middle and high school students are more receptive to studying grammar and syntax:
(Average) (Skill 3.1)

- A. Through worksheets and end-of-lesson practices in textbooks
- B. Through independent homework assignments
- C. Through analytical examination of the writings of famous authors
- D. Through application to their own writing

Answer: D. Through application to their own writing

At this age, students learn grammatical concepts best through practical application in their own writing.

32. Which of the following is NOT an approach to keep students ever conscious of the need to write for audience appeal?
(Rigorous) (Skill 3.1)

- A. Pairing students during the writing process
- B. Reading all rough drafts before the students write the final copies
- C. Having students compose stories or articles for publication in school literary magazines or newspapers
- D. Writing letters to friends or relatives

Answer: D. Writing letters to friends or relatives

Reading all rough drafts will not encourage students to take control of their text and might even inhibit their creativity. On the contrary, pairing students will foster their sense of responsibility, and having them compose stories for literary magazines will boost their self-esteem as well as their organizational skills. As far as writing letters is concerned, the work of authors such as Madame de Sevigne in the seventeenth century is a good example of epistolary literary work.

33. Which of the following mostly addresses grammatical and technical errors?
(Easy) (Skill 3.2)

- A. Revising
- B. Editing
- C. Proofreading
- D. Rough-draft writing

Answer: C. Proofreading

During the proofreading process grammatical and technical errors are addressed. The other choices indicate times when writing or rewriting is taking place.

34. A student has written a paper with the following characteristics: written in first person; includes characters, setting, and plot; includes some dialogue; events organized in chronological sequence with some flashbacks. In what genre has the student written?

(Easy) (Skill 3.3)

- A. Expository writing
- B. Narrative writing
- C. Persuasive writing
- D. Technical writing

Answer: B. Narrative writing

These are all characteristics of narrative writing. Expository writing is intended to give information, such as an explanation or directions, and the information is logically organized. Persuasive writing gives an opinion in an attempt to convince the reader that a particular point of view is valid or tries to persuade the reader to take a specific action. The goal of technical writing is to clearly communicate a select piece of information to a targeted reader or group of readers for a particular purpose. It is persuasive writing that anticipates a response from the reader.

35. Reading a piece of student writing to assess the overall impression of the product is:

(Average) (Skill 3.5)

- A. Holistic evaluation
- B. Portfolio assessment
- C. Analytical evaluation
- D. Using a performance system

Answer: A. Holistic evaluation.

Holistic scoring assesses a piece of writing as a whole. Usually a paper is read quickly through once to get a general impression. The writing is graded according to the impression of the whole work rather than the sum of its parts. Often holistic scoring uses a rubric that establishes the overall criteria for a certain score to evaluate each paper.

36. All of the following are correctly capitalized EXCEPT:
(Average) (Skill 3.6)

- A. Queen Elizabeth
- B. Congressman McKay
- C. commander Alger
- D. the president of the United States

Answer: C. commander Alger

If the statement read “Alger the commander” then *commander* would not need to be capitalized; however, because commander is the title, it is capitalized.

37. All of the following are correctly punctuated EXCEPT:
(Rigorous) (Skill 3.6)

- A. “The book is on the table,” said Bill’s mother.
- B. “Who would like to sing ‘The Star Spangled Banner’?” the teacher asked.
- C. I was embarrassed when Joanne said, “The meeting started an hour ago!”
- D. “The policeman apprehended the criminals last night.”

Answer: C. I was embarrassed when Joanne said, “The meeting started an hour ago!”

In sentences that are interrogatory or exclamatory, the question mark or exclamation point should be positioned outside the closing quotation marks if the quotation itself is a statement or command or cited title. The sentence should read:

I was embarrassed when Joanne said, “The meeting started an hour ago!”

38. Which of the following contains an error in possessive inflection?
(Rigorous) (Skill 3.6)

- A. Doris's shawl
- B. Mother's-in-law frown
- C. Children's lunches
- D. Ambassador's briefcase

Answer: B. Mother's-in-law frown

Mother-in-law is a compound common noun and the inflection should be at the end of the word, according to the rule.

39. Which of the following is a formal reading-level assessment?
(Easy) (Skill 4.1, 4.2)

- A. A standardized reading test
- B. A teacher-made reading test
- C. An interview
- D. A reading diary

Answer: A. A standardized reading test

If an assessment is standardized, it has to be objective. Choices B, C, and D are all subjective assessments.

40. All of the following are examples of ongoing informal assessment techniques used to observe student progress EXCEPT:
(Rigorous) (Skill 4.1, 4.2)

- A. Analyses of student work product
- B. Collection of data from assessment tests
- C. Effective questioning
- D. Observation of students

Answer: B. Collection of data from assessment tests

Assessment tests are formal progress-monitoring measures.

41. Before reading a passage, a teacher gives her students an anticipation guide with a list of statements related to the topic they are about to cover in the reading material. She asks the students to indicate their agreement or disagreement with each statement on the guide. This activity is intended to: (Rigorous) (Skill 4.3)

- A. Elicit students' prior knowledge of the topic and establish a purpose for reading
- B. Help students identify the main ideas and supporting details in the text
- C. Help students synthesize information from the text
- D. Help students visualize the concepts and terms in the text

Answer: A. Elicit students' prior knowledge of the topic and establish a purpose for reading

Establishing a purpose for reading, the foundation for a reading unit or activity, is intimately connected to activating the students' prior knowledge in strategic ways. When the reason for reading is developed in the context of the students' experiences, they are far better prepared to succeed because they can make connections from a base they thoroughly understand. This influences motivation, and with proper motivation, students are more enthused and put forward more effort to understand the text. The other choices are only indirectly supported by this activity and are more specific in focus.

42. A school district might assess the effectiveness of a new reading curriculum through: (Rigorous) (Skill 4.3)

- A. Formative assessment
- B. Normative assessment
- C. Diagnostic assessment
- D. Performance assessment

Answer: B. Normative assessment

Normative assessment compares student performance against an established norm of achievement (such as state or national data). The other three choices look at how a student succeeds or falls short as an individual.

**43. Which best describes differentiated instruction in reading?
(Rigorous) (Skill 4.4)**

- A. Whole-group instruction
- B. Instruction based on a student's strengths
- C. Novel study
- D. Student workbooks

Answer: B. Instruction based on a student's strengths

Differentiated instruction looks at the individual student's strengths in learning and addresses those. There may be several groups (or individuals) working on different material in a classroom that uses differentiated instruction.

**44. Assessment feedback should be:
(Easy) (Skill 4.5)**

- A. Timely
- B. Specific
- C. Constructive
- D. All of the above

Answer: D. All of the above

All of these answers reflect important practice in assessment feedback.

**45. A test is most likely to be biased if:
(Rigorous) (Skill 4.6)**

- A. It requires knowledge from out-of-school experiences.
- B. It tests discrete items taught.
- C. It is teacher-made.
- D. It requires written response.

Answer: A. It requires knowledge from out-of-school experiences.

Students come to the school setting with a variety of experiences. Some have had a rich background in community events, travel, and early literacy experiences; others have had little or no experience in these areas. If a test draws on knowledge from out-of-school experiences, it is likely to be biased against the students with little experience.

46. The English department is developing strategies to encourage students to become a community of readers. From the list of suggestions below, which would be the least effective way for teachers to foster independent reading? (Average) (Skill 4.7)

- A. Each teacher sets aside a weekly thirty-minute in-class reading session during which the teacher and students read a magazine or book for enjoyment.
- B. Teachers and students develop a list of favorite books to share with each other.
- C. The teacher assigns at least one book report each grading period to ensure that students are reading from the established class list.
- D. The students gather books for a classroom library so that books can be shared.

Answer: C. The teacher assigns at least one book report each grading period to ensure that students are reading from the established class list.

Teacher-directed assignments such as book reports appear routine and unexciting. Students will be more excited about reading when they can actively participate. In choice A, the teacher is modeling reading behavior and providing students with a dedicated time when they can read independently and be surrounded by a community of readers. In choices B and D, students share and make available their reading selections.

47. If a student has a poor vocabulary, the teacher should recommend first that: (Average) (Skill 4.9)

- A. The student read newspapers, magazines, and books on a regular basis
- B. The student enroll in a Latin class
- C. The student write words repetitively after looking them up in the dictionary
- D. The student use a thesaurus to locate synonyms and incorporate them into his/her vocabulary

Answer: A. The student read newspapers, magazines, and books on a regular basis

The teacher can influence what the student chooses as reading material, but the student must be able to choose independently where to search for the reading pleasure indispensable for enriching vocabulary.

48. In preparing students for their oral presentations, the instructor provided all of the following guidelines, EXCEPT one. Which is NOT an effective guideline?

(Average) (Skill 5.2)

- A. Even if you are using a lectern, feel free to move about. This will connect you to the audience.
- B. Your posture should be natural, not stiff. Keep your shoulders toward the audience.
- C. Gestures can help communicate as long as you don't overuse them or make them distracting.
- D. You can avoid eye contact if you focus on your notes. This will make you appear more knowledgeable.

Answer: D. You can avoid eye contact if you focus on your notes. This will make you appear more knowledgeable.

Although many people are nervous about making eye contact, speakers should focus on two or three people at a time. Body language, such as movement, posture, and gestures, helps the speaker connect to the audience.

49. Which of the following is NOT an advisable strategy for making sense of oral language?

(Average) (Skill 5.3)

- A. Observe body language and other nonverbal cues.
- B. Take notes to outline major points.
- C. Critique, question, and evaluate others' as well as students' own oral presentations.
- D. Ignore prior knowledge of the topic as it does not help understanding of what is being presented.

Answer: D. Ignore prior knowledge of the topic as it does not help understanding of what is being presented.

Observing body language and other nonverbal cues, taking notes to outline major points, and critiquing, questioning, and evaluating others' as well as students' own oral presentations are all good strategies when listening to an oral presentation. Ignoring prior knowledge of the topic does not help make sense of oral language.

50. Which of the following are examples of research materials that are available to use?

(Easy) (Skill 6.1)

- A. Encyclopedias
- B. Internet search engines
- C. Card catalogs
- D. All of the above

Answer: D. All of the above

Encyclopedias, Internet search engines such as Google and AOL, and card catalogs can all be used for research purposes; however, the researcher should evaluate all information for credibility.

51. In general, the most serious drawback of using a computer in writing is that:
(Average) (Skill 6.1)

- A. The copy looks so good that students tend to overlook major mistakes.
- B. The spell-check and grammar programs discourage students from learning proper spelling and mechanics.
- C. The speed with which corrections can be made detracts from the exploration and contemplation of composing.
- D. The writer loses focus by concentrating on the final product rather than the details.

Answer: C: The speed with which corrections can be made detracts from the exploration and contemplation of composing.

Because the process of revising is very quick with the computer, it can discourage contemplation, exploration, and examination, which are very important in the writing process.

52. In preparing to write a research paper about a social problem, how can you determine the credibility of the information?

(Rigorous) (Skill 6.2)

- A. Realize that information on the Internet has been peer-reviewed and verified for accuracy.
- B. Find one solid source and use that exclusively.
- C. Use only primary sources.
- D. Cross-check your information with another credible source.

Answer: D. Cross-check your information with another credible source.

When researchers find the same information in multiple reputable sources, the information is considered credible. Using the Internet for research requires strong critical evaluation of the source. Nothing from the Internet should be taken without careful scrutiny of the source. To rely on only one source is dangerous and shortsighted.

53. Which of the following is NOT considered ethical behavior for a scientist?

(Rigorous) (Skill 6.2)

- A. Using unpublished data and citing the source
- B. Publishing data before other scientists have had a chance to replicate results
- C. Collaborating with other scientists from different laboratories
- D. Publishing work with an incomplete list of citations

Answer: D. Publishing work with an incomplete list of citations

One of the most important ethical principles for scientists is to cite all sources of data and analysis when publishing work. It is reasonable to use unpublished data as long as the source is cited. Most scientific work is published before other scientists replicate it, and frequently scientists collaborate with each other, in the same or different laboratories. These are all ethical choices. However, publishing work without the appropriate citations is unethical.

SOCIAL SCIENCE

54. For the historian studying ancient Egypt, which of the following would be least useful?

(Rigorous) (Skill 7.2)

- A. The record of an ancient Greek historian on Greek-Egyptian interaction
- B. Letters from an Egyptian ruler to his/her regional governors
- C. Inscriptions from the Fourteenth Dynasty of Egypt
- D. Letters from a nineteenth-century Egyptologist to his wife

Answer: D. Letters from a nineteenth-century Egyptologist to his wife

Historians use primary sources from the actual time they are studying whenever possible. Ancient Greek records of interaction with Egypt, letters from an Egyptian ruler to regional governors, and inscriptions from the Fourteenth Dynasty of Egypt are all primary sources created at or near the actual time being studied. Letters from a nineteenth-century Egyptologist would not be considered primary sources, as they were created thousands of years after the fact and may not actually be about the subject being studied.

55. An example of something that is not a primary source is:

(Average) (Skill 7.2)

- A. The published correspondence between Winston Churchill and Franklin D. Roosevelt during World War II
- B. Martin Gilbert's biography of Winston Churchill
- C. The diary of Field Marshall Sir Alan Brooke, the head of the British Army during World War II
- D. Franklin D. Roosevelt's handwritten notes from the World War II era

Answer: B. Martin Gilbert's biography of Winston Churchill

Martin Gilbert's biography of Winston Churchill is a secondary source because it was not written by Churchill himself. The Churchill-Roosevelt correspondence, Brooke's diary, and FDR's handwritten notes are all primary source documents written by actual historical figures.

56. Which civilization invented the wheel?
(Easy) (Skill 7.3)

- A. Egyptian
- B. Roman
- C. Assyrian
- D. Sumerian

Answer: D. Sumerian

The ancient Sumerian civilization invented the wheel.

57. What is the Pax Romana?
(Rigorous) (Skill 7.3)

- A. A long period of peace allowing free travel and trade, spreading people, cultures, goods, and ideas all over the world
- B. A period of war when the Romans expanded their empire
- C. The Roman government
- D. A time when the government was overruled

Answer: A. A long period of peace allowing free travel and trade, spreading people, cultures, goods, and ideas all over the world

The Pax Romana was a time when the Romans were peaceful and wanted to spread their culture all over the world.

**58. What intellectual movement during the period of North American colonization contributed to the development of public education and the founding of the first colleges and universities?
(Average) (Skill 7.5)**

- A. Enlightenment
- B. Great Awakening
- C. Libertarianism
- D. Scientific Revolution

Answer: A. Enlightenment

Enlightenment thinking quickly made the voyage across the Atlantic Ocean. It valued human reason and the importance of education, knowledge, and scholarly research. Education in the Middle Atlantic colonies was influenced largely by the Enlightenment movement, which emphasized scholarly research and public service. Benjamin Franklin embodied these principles in Philadelphia, which became a center of learning and culture, owing largely to its economic success and ease of access to European books and tracts.

**59. The “divine right” of kings was the key political characteristic of the:
(Average) (Skill 7.5)**

- A. Age of Absolutism
- B. Age of Reason
- C. Age of Feudalism
- D. Age of Despotism

Answer: A. Age of Absolutism

The divine right of kings was the key political characteristic of the Age of Absolutism and was most visible in the reign of King Louis XIV of France, as well as during the times of King James I and his son, Charles I. The divine right doctrine claims that kings and absolute leaders derive their right to rule by virtue of their birth alone. These leaders see this both as a law of God and of nature.

**60. Which scientist is credited with launching the Scientific Revolution in the sixteenth century?
(Rigorous) (Skill 7.5)**

- A. Roger Bacon
- B. Nicolaus Copernicus
- C. Johannes Kepler
- D. Isaac Newton

Answer: B. Nicolaus Copernicus

Roger Bacon (1224–1294) is considered one of the early advocates of the scientific method. In the fourteenth century, there was scientific progress in kinematics, but the Scientific Revolution began in the sixteenth century with the heliocentric theory of Nicolaus Copernicus. In 1605, Johannes Kepler discovered that planets orbit the Sun in elliptical, not circular, paths. In 1677, Isaac Newton derived Kepler’s laws from the second law of motion.

**61. The belief that the United States should control all of North America was called:
(Easy) (Skill 7.6)**

- A. Westward Expansion
- B. Pan-Americanism
- C. Manifest Destiny
- D. Nationalism

Answer: C. Manifest Destiny

The belief that the United States should control all of North America was called Manifest Destiny. This idea fueled much of the violence and aggression toward those already occupying the lands such as the Native Americans. Manifest Destiny was certainly driven by sentiments of (D) nationalism and gave rise to (A) westward expansion.

62. Which war took the most American lives in American history?
(Easy) (Skill 7.6)

- A. Civil War
- B. Revolutionary War
- C. World War I
- D. World War II

Answer: A. Civil War

In the Civil War, it was Americans fighting Americans, so the casualties were extremely high—higher than those in the Revolutionary War and both World War I and World War II.

63. The cold war involved which two countries that emerged from World War II as world powers?
(Easy) (Skill 7.6)

- A. China and Japan
- B. United States and the Soviet Union
- C. England and Brazil
- D. Afghanistan and the United States

Answer: B. United States and the Soviet Union

After World War II, the United States and the Soviet Union constantly competed in space exploration and the race to develop nuclear weapons.

64. The year 1619 was a memorable one for the colony of Virginia. Three important events occurred, resulting in lasting effects on U.S. history. Which of the following is NOT one of these events?
(Average) (Skill 7.6)

- A. Twenty African slaves arrived.
- B. The London Company granted the colony a charter, making it independent.
- C. The colonists were given the right by the London Company to govern themselves through representative government in the Virginia House of Burgesses.
- D. The London Company sent to the colony sixty women who were quickly married, establishing families and stability in the colony.

Answer: B. The London Company granted the colony a charter, making it independent.

In 1619, the Southern colony of Virginia had an eventful year including the first arrival of twenty African slaves, the right to self-governance through representative government in the Virginia House of Burgesses (the colony's own legislative body), and the arrival of sixty women sent to marry and establish families in the colony. The London Company did not, however, grant the colony a charter in 1619.

65. How did the United States acquire Florida from Spain?
(Average) (Skill 7.6)

- A. It was captured from Spain after the Spanish-American War.
- B. It was given to the British and became part of the original thirteen colonies.
- C. Spain ceded it to the U.S. following the War of 1812.
- D. America acquired it after World War I.

Answer: C. Spain ceded it to the U.S. following the War of 1812.

Spain received \$5 million for Florida, mostly to pay for damages incurred during the war. Following the War of 1812, Spain actually ceded Florida to the United States as part of the treaty.

66. Which one of the following would NOT be considered a result of World War II?

(Rigorous) (Skill 7.6)

- A. Economic depression and slow resumption of trade and financial aid
- B. Western Europe no longer the center of world power
- C. The beginnings of new power struggles not only in Europe but in Asia as well
- D. Territorial and boundary changes for many nations, especially in Europe

Answer: A. Economic depression and slow resumption of trade and financial aid

Following World War II, the economy was vibrant and flourished from the stimulus of war and the world's increased dependence on U.S. industries. Western Europe was no longer the center of world power. New power struggles arose in Europe and Asia, and many European nations experienced changing territories and boundaries.

67. U.S. concern about the possible spread of communism is most closely associated with:

(Rigorous) (Skill 7.6)

- A. The Vietnam War
- B. The Civil War
- C. The Korean War
- D. World War I

Answer: C. The Korean War

The rise of Soviet power and communism was most greatly feared during the time of the Korean War.

68. What was “triangular trade”?
(Rigorous) (Skill 7.6)

- A. Regulated trade between the colonies, England, and France
- B. An approach to trade that transported finished goods from the mother country to the African colonies, slaves and goods from Africa to the North American colonies, and raw materials and tobacco or rum back to the mother country
- C. An approach to trade that resulted in colonists obtaining crops and goods from the Native American tribes in exchange for finished goods from England
- D. Trade between the colonists and Africa and the West Indies

Answer: B. An approach to trade that transported finished goods from the mother country to the African colonies, slaves and goods from Africa to the North American colonies, and raw materials and tobacco or rum back to the mother country.

The New England and Middle Atlantic colonies at first felt threatened by these laws as they had started producing many of the same products being produced in Britain. But they soon found new markets for their goods and began what was known as a triangular trade. Colonial vessels started the first part of the triangle by sailing for Africa loaded with kegs of rum from colonial distilleries. On Africa's west coast, the rum was traded for either gold or slaves. The second part of the triangle was from Africa to the West Indies, where slaves were traded for molasses, sugar, or money. The third part of the triangle was the trip home, bringing sugar or molasses (to make more rum), gold, and silver.

69. Which of the following is NOT a reason why Europeans came to the New World?

(Rigorous) (Skill 7.6)

- A. To find resources in order to increase wealth
- B. To establish trade
- C. To increase a ruler's power and importance
- D. To spread Christianity

Answer: B. To establish trade

The Europeans came to the New World for a number of reasons; often, they came to find new natural resources to extract for manufacturing. The Portuguese, Spanish, and English were sent over to increase the monarch's power and spread influences such as religion (Christianity) and culture. However, they didn't come to the New World to establish trade.

70. The westward expansion occurred for a number of reasons; however, the most important reason was:

(Easy) (Skill 7.7)

- A. Colonization
- B. Slavery
- C. Independence.
- D. Economics

Answer: D. Economics

Westward expansion occurred for a number of reasons, the most important of which was economic.

71. All of the following were causes of the American Revolution EXCEPT:
(Average) (Skill 7.7)

- A. The Tea Act of 1773
- B. The Stamp Act
- C. The colonists were forced to house English troops.
- D. The colonists wanted more schools.

Answer: D. The colonists wanted more schools.

The colonists were not concerned about the number of schools they had, and it was not a factor in the American Revolution. However, England continued to levy taxes and exercise power that the colonists resented.

72. Which of the following contributed to the severity of the Great Depression in California?
(Average) (Skill 7.8)

- A. An influx of Chinese immigrants
- B. The Dust Bowl drove people out of the cities
- C. An influx of Mexican immigrants
- D. An influx of Okies

Answer: D. An influx of Okies

The Dust Bowl of the Great Plains destroyed agriculture in the area. People living in the Plains areas lost their livelihood and many lost their homes and possessions in the great dust storms that resulted from a period of extended drought. People from all of the states affected by the Dust Bowl made their way to California in search of a better life. Because most of them were from Oklahoma, they were all referred to as Okies. These migrants brought with them their distinctive Plains culture. The great influx of people seeking jobs exacerbated the effects of the Great Depression in California.

73. What was the name of the cultural revival that took place after the Civil War? (Rigorous) (Skill 7.8)

- A. The Revolutionary War
- B. The Second Great Awakening
- C. The Harlem Renaissance
- D. The Gilded Age

Answer: C. The Harlem Renaissance

As African-Americans left the rural South and migrated to the North in search of opportunity, many settled in Harlem in New York City. By the 1920s, Harlem had become a center of life and activity for persons of color. The music, art, and literature of this community gave birth to a cultural movement known as the Harlem Renaissance.

74. Florida was initially inhabited by the following native peoples EXCEPT: (Average) (Skill 7.9)

- A. Timucans
- B. Apalachee
- C. Calusa
- D. Illini

Answer: D. Illini

The Timucans lived in the central and northeast area of Florida. The Apalachee lived in the northwest part of the state, and the Calusa lived in the southern part. The Illini people lived in the area now called Illinois.

**75. The first European to see Florida and sail along its coast was:
(Rigorous) (Skill 7.9)**

- A. Cabot
- B. Columbus
- C. Ponce de Leon
- D. Narvaez

Answer: A. Cabot

John Cabot (1450-1498) was the English explorer who gave England claim to North America and the first European to see Florida and sail along its coast. Columbus (1451-1506) was sent by the Spanish to the New World and has received false credit for “discovering America” in 1492, although he did open up the New World to European expansion, exploitation, and Christianity. Ponce de Leon (1460-1521), the Spanish explorer, was the first European to actually land on Florida. Panfilo de Narvaez (1470-1528) was also a Spanish conquistador, but he was sent to Mexico to force Cortes into submission. He failed and was captured.

**76. Which shows the relationship between a unit of measure on a map and the real world?
(Average) (Skill 8.2)**

- A. The scale
- B. The legend
- C. The grid
- D. The compass rose

Answer: A. The scale

The scale shows the representation of distance on a map compared to actual miles. For example, one inch on a map might equal one hundred miles on the Earth. The legend tells what symbols represent. The grid shows longitude and latitude, and the compass rose shows direction (north, south, etc.).

77. All of the following are examples of why the first known civilizations developed near water EXCEPT:
(Rigorous) (Skill 8.4)
- A. Rivers provided water, which both the humans and animals needed.
 - B. Rivers allowed the settlers to travel so they could trade goods.
 - C. The rivers attracted animals so hunters had a continuous supply of food.
 - D. The rivers overflowed, which left a deposit of very rich soil.

Answer: B. Rivers allowed the settlers to travel so they could trade goods.
There is no evidence that the *first* civilizations used water for trading purposes.

78. The study of the social well-being of people is included in:
(Rigorous) (Skill 8.5)

- A. Geography
- B. Topography
- C. Demography
- D. Deposition

Answer: C. Demography
Geography is the study of the Earth. Topography includes land formations and elevations, and deposition is the result of transportation and occurs when the material being carried settles on the surface and is deposited.

79. Which term best defines the customs, traditions, and arts of a group of people?

(Easy) (Skill 8.6)

- A. Culture
- B. Democracy
- C. Interdependence
- D. Geography

Answer: A. Culture

When dealing with the customs, traditions, and the arts of a group of people only choice A makes sense. The other answers do not refer to people, so they are not logical answers to the question.

80. Which of the following is the most accurate definition of a nonrenewable resource?

(Average) (Skill 8.7)

- A. A nonrenewable resource is never replaced once used.
- B. A nonrenewable resource is replaced on a timescale that is very long relative to human life spans.
- C. A nonrenewable resource is a resource that can only be manufactured by humans.
- D. A nonrenewable resource is a species that has already become extinct.

Answer: B. A nonrenewable resource is replaced on a timescale that is very long relative to human life spans.

Renewable resources are those that are renewed, or replaced, in time for humans to use more of them. Examples include fast-growing plants, animals, or oxygen gas. (Note that while sunlight is often considered a renewable resource, it is actually a nonrenewable but extremely abundant resource.) Nonrenewable resources are those that renew themselves only on very long—usually geologic—timescales. Examples include minerals, metals, or fossil fuels.

81. All of the following are oceans EXCEPT:
(Easy) (Skill 8.8)

- A. Pacific
- B. Atlantic
- C. Mediterranean
- D. Indian

Answer: C. Mediterranean

The Mediterranean is a sea, which is smaller than an ocean and surrounded by land.

82. The Bill of Rights consists of which amendments to the U.S. Constitution?
(Easy) (Skill 9.2)

- A. Amendments 1-5
- B. Amendments 1-10
- C. Amendments 1 and 2
- D. Amendments 1-22

Answer: B. Amendments 1-10

The Bill of Rights consists of the first ten amendments.

83. Which document includes the freedom of religion and right to trial by jury?
(Rigorous) (Skill 9.2)

- A. Bill of Rights
- B. Gettysburg Address
- C. Articles of Confederation
- D. Martin Luther King's "I Have a Dream" speech

Answer: A. Bill of Rights

The Bill of Rights includes ten basic rights of individuals, including freedom of religion and the right to trial by jury.

**84. Who was the principal writer of the Declaration of Independence?
(Average) (Skill 9.3)**

- A. Patrick Henry
- B. Thomas Jefferson
- C. Benjamin Franklin
- D. George Washington

Answer: B. Thomas Jefferson

Although Benjamin Franklin was responsible for editing it and making it the prime example of neoclassical writing that it is, the Declaration of Independence came directly from the mind and pen of Jefferson. Patrick Henry was a great orator and his speeches played an important role in bringing on the revolution; and while George Washington's address, "Farewell to the Army of the Potomac," is an important piece of writing from that era, it was Jefferson whose genius produced the Declaration.

**85. What are the three branches of the United States government?
(Easy) (Skill 9.4)**

- A. Legislative, judicial, international affairs
- B. Legislative, executive, foreign trade
- C. Legislative, executive, judicial
- D. Executive, judicial, state governments

Answer: C. Legislative, executive, judicial

There are three branches of the U.S. federal government: legislative, executive, and judicial.

86. Economics is best described as:
(Average) (Skill 10.1)

- A. The study of how money is used in different societies
- B. The study of how different political systems produce goods and services
- C. The study of how human beings use limited resources to supply their necessities and wants
- D. The study of how human beings have developed trading practices through the years

Answer: C. The study of how human beings use limited resources to supply their necessities and wants

How money is used in different societies might be of interest to a sociologist or anthropologist. The study of how different political systems produce goods and services is a topic that could be included in the field of political science. The study of historical trading practices could fall under the study of history. Only choice C is the best general description of the social science of economics.

87. If the price of Good G increases, what is likely to happen with regard to comparable Good H?
(Rigorous) (Skill 10.1)

- A. The demand for Good G will stay the same.
- B. The demand for Good G will increase.
- C. The demand for Good H will increase.
- D. The demand for Good H will decrease.

Answer: C. The demand for Good H will increase.

If Good G and Good H are viewed by consumers as equal in value, but then the cost of Good G increases, it follows that consumers will now choose Good H at a higher rate, increasing the demand.

88. When planning a family budget, decisions must include:
(Rigorous) (Skill 10.4)

- A. The stock market
- B. Needs and wants
- C. Credit rating
- D. Scarcity

Answer: B. Needs and wants

A family must first consider needs when planning a budget, and prioritize wants with remaining funds.

MUSIC, VISUAL ARTS, PHYSICAL EDUCATION, AND HEALTH

89. Sound waves are produced by _____ .
(Easy) (Skill 12.2)

- A. Pitch
- B. Noise
- C. Vibrations
- D. Sonar

Answer: C. Vibrations

Sound waves are produced by a vibrating body. The vibrating object moves forward and compresses the air in front of it, then reverses direction so that pressure on the air decreases and the air molecules expand. The vibrating air molecules move back and forth parallel to the direction of the wave motion as they pass the energy from air molecules closer to the source to air molecules farther away from the source. Therefore, choice C is correct.

**90. Common percussion instruments include:
(Average) (Skill 12.3)**

- A. Xylophone, tambourine, and bells
- B. Trumpet, trombone, and tuba
- C. Oboe, clarinet, and saxophone
- D. Viola, cello, and piano

Answer: A. Xylophone, tambourine, and bells.

Percussion instruments are those that the musician hits or shakes to make sound. These include the xylophone, tambourine, and bells. Both brass and wind instruments make sound as air travels through an air chamber. Trumpets, trombones, and tubas are examples of brass instruments and the oboe, clarinet, and saxophone are examples of wind instruments. The viola, cello, and piano are examples of string instruments.

**91. In visual arts such as music and dance, the intentional, regular repetition of a given element most commonly serves as a feeling of:
(Average) (Skill 12.3)**

- A. Rhythm
- B. Dissonance
- C. Contrast
- D. Dominance

Answer: A. Rhythm

Rhythm is the basis of dance and is developed through repetition and practice.

92. A combination of three or more tones sounded at the same time is called a:
(Average) (Skill 12.4)

- A. Harmony
- B. Consonance
- C. Chord
- D. Dissonance

Answer: C. Chord

This is a musical definition of a chord that should be learned from your program of study.

93. During the early childhood years (ages 3-5), drama and theater experiences are especially beneficial to children because they provide the opportunity for students to:
(Rigorous) (Skill 12.6)

- A. Apply the concept of taking turns
- B. Learn the importance of listening skills
- C. Acquire the skills needed to become a proficient reader
- D. Learn early drama skills using their five senses

Answer: D. Learn early drama skills using their five senses

Early childhood experiences with drama and theater incorporate seeing the performance (or performing themselves), touching the furry animal costumes, hearing the sound effects, and perhaps tasting or smelling foods that are used in the performance or in a related experience lesson.

**94. A series of single tones which add up to a recognizable sound is called a:
(Average) (Skill 13.1)**

- A. Cadence
- B. Rhythm
- C. Melody
- D. Sequence

Answer: C. Melody

This is a musical definition of a melody that should be learned from your program of study.

**95. The quality of sound is the definition of:
(Average) (Skill 13.1)**

- A. Timbre
- B. Rhythm
- C. Harmony
- D. Melody

Answer: A. Timbre

Rhythm refers to the duration of musical notes. Harmony refers to the vertical aspect of music or the musical chords related to a melody. Finally, melody is the tune (a specific arrangement of sounds in a pleasing pattern).

**96. In visual art studies students are expected to be able to interact in all of the following exercises EXCEPT one.
(Average) (Skill 13.2)**

- A. Clap out syllabic patterns found in song lyrics
- B. Compare and contrast various art pieces
- C. Recognize related dance vocabulary
- D. Identify and sort pictures organized by shape, size, and color

Answer: C. Recognize related dance vocabulary

Dance is not a related area in visual arts.

97. Which is NOT a true statement about crafts?
(Average) (Skill 13.3)

- A. Students experiment with their own creativity
- B. Products are unique and different
- C. Self-expression is encouraged
- D. Outcome is predetermined

Answer: D. Outcome is predetermined

When students are allowed to experiment and express themselves freely, what they produce is individualized and unique; the outcome cannot be predetermined.

98. The following is NOT a good activity to encourage fifth graders' artistic creativity:
(Average) (Skill 13.3)

- A. Ask them to make a decorative card for a family member.
- B. Have them work as a team to decorate a large wall display.
- C. Ask them to copy a drawing from a book, with the higher grades being awarded to those students who come closest to the model.
- D. Have each student try to create an outdoor scene with crayons, giving them a choice of scenery.

Answer: C. Ask them to copy a drawing from a book, with the higher grades being awarded to those students who come closest to the model.

Although copying examples from a book might be an appropriate exercise to teach technique, it does not enable the students to be creative. To grade such an effort is unfair and stifling. When encouraged to participate freely in artistic creativity, students will experience the joy of creating art for art's sake.

**99. Creating movements in response to music helps students to connect music and dance in which of the following ways?
(Average) (Skill 13.4)**

- A. Rhythm
- B. Costuming
- C. Speed
- D. Vocabulary skills

Answer: A. Rhythm

Students should be able to understand that the connections made between movement and music are related by rhythm.

**100. In the visual arts, works that project a design from the center axis are said to have:
(Rigorous) (Skill 13.4)**

- A. Horizontal balance
- B. Radial balance
- C. Symmetrical balance
- D. Asymmetrical balance

Answer: B. Radial balance

Balance is a fundamental of design, seen as a visual weight and counterweight, and radial balance refers to works that project a design from the center axis. Horizontal balance includes works that utilize the picture plane from left to right. Works with symmetrical balance have objects or arrangements on both sides, and works with asymmetrical balance are uneven or display objects or arrangements on one side or another.

**101. Which of the following types and styles of music is described as a large musical work consisting of four movements, or sections?
(Average) (Skill 14.1)**

- A. Cantata
- B. Symphony
- C. Sonata
- D. Chorale

Answer: B. Symphony

A symphony is defined as a large musical work consisting of four movements, or sections. A cantata is written for a chorus and can have a variety of movements. A sonata is a succession of movements, which have loosely related tonalities. A chorale is a hymn sung by a group or congregation.

**102. Local elected officials and guest or resident artists are brought into the classroom to:
(Average) (Skill 15.2)**

- A. Explain their jobs or trades
- B. Observe teaching skills
- C. Enrich and extend the arts curriculum
- D. Entertain students and teachers

Answer: C. Enrich and extend the arts curriculum

Teachers often look for outside sources to aid in their students' understanding of lessons and concepts. The artist-in-residence program is an example of how artists can enrich an art program.

103. In the area of performing arts, specifically dance, students in primary grades are expected to have a gross understanding of their motor movements. Which of the following movements would NOT be age-appropriate? (Rigorous) (Skill 16.1)

- A. Basic rhythm
- B. Early body awareness
- C. Imagery
- D. Listening skills

Answer: C. Imagery

Early childhood students are expected to have limited understanding of their bodies and general movement of them. However, early imagery is a tool that is only developed once a student begins to mature and doesn't typically happen until late-elementary or early-middle-school age.

104. Which of the following statements indicates an instructional goal for using multimedia in the classroom? (Rigorous) (Skill 16.1)

- A. Audio messages invite the listener to form mental images consistent with the topic of the audio.
- B. Print messages appeal almost exclusively to the mind and push students to read with more thought.
- C. Listening to an audio message is more passive than reading a print message.
- D. Teachers who develop activities to foster a critical perspective on audiovisual presentations will decrease passivity.

Answer: D. Teachers who develop activities to foster a critical perspective on audiovisual presentations will decrease passivity.

Each of the statements is true but only the last one establishes a goal for using multimedia in the classroom.

105. Improved cardio-respiratory fitness and lower resting heart rate can result from:

(Easy) (Skill 17.1)

- A. Rest
- B. Exercise
- C. Diet
- D. Education

Answer: B. Exercise

Exercise improves cardio-respiratory fitness. One result is a lower resting heart rate.

106. The components of nutrition are carbohydrates, proteins, fats, vitamins, minerals, and:

(Average) (Skill 17.2)

- A. Iron
- B. Water
- C. Salt
- D. Flavor

Answer: B. Water

Although salt, iron, and flavor may add some dietary benefit or enjoyment, water is the missing component of nutrition.

107. Goal setting should include:

(Easy) (Skill 17.3)

- A. Small, short-term steps
- B. Rewards
- C. Realistic planning
- D. All of the above

Answer: D. All of the above

Goal setting should be realistic with small, short-term steps leading to the accomplishment of larger goals. To keep on track, rewards should also be part of the goal-setting process.

**108. The period of development that includes children learning more complex motor patterns including running, jumping, climbing, and balancing describes which stage of motor development?
(Average) (Skill 18.1)**

- A. Stage 1
- B. Stage 2.
- C. Stage 3
- D. Stage 4

Answer: B. Stage 2

In Stage 1, children progress from simple reflexes to basic movements such as sitting, crawling, creeping, standing, and walking. In Stage 2, children learn more complex motor patterns including running, climbing, jumping, balancing, catching, and throwing. In Stage 3, children learn more specific movement skills. Finally, in Stage 4 (during adolescence), children continue to develop general and specific motor skills and master specialized movements.

**109. Sitting, crawling, and creeping develop after:
(Rigorous) (Skill 18.1)**

- A. Simple reflexes
- B. Late childhood
- C. Climbing
- D. Balancing

Answer: A. Simple reflexes

In infancy, simple reflexes such as startle and grasping a parent's finger come before sitting, crawling, and creeping. Climbing and balancing come later.

**110. Activities that enhance team socialization include all of the following EXCEPT:
(Easy) (Skill 18.3)**

- A. Basketball
- B. Soccer
- C. Golf
- D. Volleyball

Answer: C. Golf

Golf is mainly an individual sport. Though golf involves social interaction, it generally lacks the team element inherent in basketball, soccer, and volleyball.

**111. Social skills and values developed by activity include all of the following EXCEPT:
(Average) (Skill 18.3)**

- A. Winning at all costs
- B. Making judgments in groups
- C. Communicating and cooperating
- D. Respecting rules and property

Answer: A. Winning at all costs

Winning at all costs is not a desirable social skill. Instructors and coaches should emphasize fair play and effort over winning. Choices B, C, and D are all positive skills and values developed in physical activity settings.

112. Through physical activities, John has developed self-discipline, fairness, respect for others, and new friends. John has experienced which of the following?

(Rigorous) (Skill 18.3)

- A. Positive cooperation psychosocial influences
- B. Positive group psychosocial influences
- C. Positive individual psychosocial influences
- D. Positive accomplishment psycho-social influences

Answer: B. Positive group psychosocial influences

Social interaction is the sequence of social actions between individuals (or groups) that modify their actions and reactions in response to the actions of their interaction partner(s). In other words, people attach meaning to a situation, interpret what others mean, and respond accordingly. Through socialization with other people, John feels the influence of the people around him.

113. Which of the following psychosocial influences is NOT negative?

(Rigorous) (Skill 18.3)

- A. Avoidance of problems
- B. Adherence to exercise
- C. Ego-centeredness
- D. Role conflict

Answer: B. Adherence to exercise

The ability of an individual to adhere to an exercise routine due to her/his excitement, accolades, etc., is not a negative psychosocial influence. Adherence to an exercise routine is healthy and positive.

114. A six-year-old student in Ms. Brack's first-grade class has exhibited a noticeable change in behavior over the last month. The child had been outgoing and alert but she has become quiet and withdrawn, and appears to be unable to concentrate on her work. Yesterday, bruises were evident on the child's arm and right eye. Ms. Brack should:

(Average) (Skill 18.4)

- A. Ignore the situation
- B. Provide remedial work
- C. Immediately report suspected abuse to the authorities
- D. Call the girl's parents

Answer: C. Immediately report suspected abuse to the authorities

Teachers are required by law to report suspected cases of child abuse.

115. Anabolic steroids, alcohol, and marijuana are all:

(Easy) (Skill 19.1)

- A. Substances that can be abused
- B. Types of medication
- C. Illegal
- D. Legal

Answer: A. Substances that can be abused

Each item listed can be abused. It is not true that they are all medication, illegal, or legal.

116. The alleged benefit of this substance or these substances is an increase in muscle mass and strength; however, it produces harmful side effects such as premature closure of growth plates in bones.

(Rigorous) (Skill 19.1)

- A. Cocaine
- B. Alcohol
- C. Nicotine
- D. Steroids

Answer: D. Steroids

Anabolic steroids are illegal and produce harmful side effects, including premature closure of growth plates in bones if abused by a teenager, limiting adult height. Other effects include bloody cysts in the liver, increased risk of cardiovascular disease, increased blood pressure, and dysfunction of the reproductive system.

117. The most effective way to promote the physical education curriculum is to:

(Rigorous) (Skill 19.2)

- A. Relate physical education to higher thought processes
- B. Relate physical education to humanitarianism
- C. Relate physical education to the total educational process
- D. Relate physical education to skills necessary to preserve the natural environment

Answer: C. Relate physical education to the rest of the educational process

Because of all of the sports and games that we now participate in, many countries have focused their hearts and set their minds on competing with rival countries. Physical education is now a major subject and instructors should fully integrate it into the educational process.

118. A physical education instructor anticipates and prevents potential injuries, watches for hidden injuries, and takes an injury evaluation of the entire class. Which of the following strategies to prevent injuries is the teacher demonstrating?

(Average) (Skill 19.4)

- A. Maintaining hiring standards
- B. Proper use of equipment
- C. Proper procedures for emergencies
- D. Participant screening

Answer: D. Participant screening

Such surveys are one way to know the physical status of an individual. They chronicle past injuries, tattoos, activities, and diseases an individual may have or have had. It helps the instructor know the limitations of each individual. Participant screening covers all forms of surveying and anticipation of injuries.

119. Injury prevention includes:

(Average) (Skill 19.4)

- A. Discipline and conditioning
- B. Standards and education
- C. Participant screening
- D. All of the above

Answer: D. All of the above

Injury prevention is best accomplished by all of the choices. Students must have a standard of accepted activity. They must be educated in safe practices. Students should also be guided in discipline and physical conditioning. Teachers should assume responsibility for participant screening to note possible injuries.

**120. Activities of interpreting audio, visual, and tactile stimuli are:
(Rigorous) (Skill 20.1)**

- A. Reflex movements
- B. Perceptual abilities
- C. Locomotor movements
- D. Skilled movements

Answer: B. Perceptual abilities

The way students naturally perceive sensory stimuli (auditory, visual, and tactile) refers to their perceptual abilities. Reflex movements are automatic. Locomotor refers to how they move, and skilled refers to movements that have been learned.

**121. A physical education teacher emphasizes healthy attitudes and habits. She conducts her classes so that students acquire and interpret knowledge and learn to think/analyze, which is necessary for physical activities. The goals and values utilized and the philosophy applied by this instructor are:
(Rigorous) (Skill 20.1)**

- A. Physical development goals and realism philosophy
- B. Affective development goals and existentialism
- C. Motor development goals and realism philosophy
- D. Cognitive development goals and idealism philosophy

Answer: D. Cognitive development goals and idealism philosophy

Educators use cognitive development goals to describe teaching children in a manner that will help them develop as personal and social beings. Concepts that fall under this umbrella include social and emotional learning, moral reasoning/cognitive development, life-skills education, health education, violence prevention, critical thinking, ethical reasoning, and conflict resolution and mediation. This form of education involves teaching children and teenagers such values as honesty, stewardship, kindness, generosity, courage, freedom, justice, equality, and respect. Idealism is an approach to philosophical inquiry which asserts that direct and immediate knowledge can only be had as ideas or mental pictures. We can only know the objects that are the basis of these ideas indirectly.

**122. When planning physical education activities teachers should consider:
(Easy) (Skill 20.2)**

- A. Availability and cost of equipment
- B. Student safety
- C. Community resources
- D. All of the above

Answer: D. All of the above

When planning physical education activities, student safety must be a primary concern. Of course, equipment must be available, and teachers should plan according to the equipment they have. Community resources (such as a swimming pool) may offer additional opportunities for planning the physical education program.

**123. A student's motor development is influenced by:
(Easy) (Skill 20.3)**

- A. Culture
- B. Environment
- C. Family
- D. All of the above

Answer: D. All of the above

Families and cultures place different emphasis on physical activity. This leads to an influence on a student's motor development. Environment also plays a role as some students may live close to parks or basketball courts whereas others may not.

126. The following are examples of chemical reactions EXCEPT:
(Average) (Skill 21.2)

- A. Melting ice into water
- B. Dissolving a seltzer tablet in water
- C. Using a firecracker
- D. Burning a piece of plastic

Answer: A. Melting ice into water

When you melt ice there is no chemical reaction. Ice and water have the same chemical makeup.

127. Which parts of an atom are located inside the nucleus?
(Average) (Skill 21.6)

- A. Electrons and neutrons
- B. Protons and neutrons
- C. Protons only
- D. Neutrons only

Answer: B. Protons and neutrons

Protons and neutrons are located in the nucleus, while electrons move around outside the nucleus. This is consistent only with choice B.

128. Which atomic particles have a positive charge?
(Easy) (Skill 21.6)

- A. Electrons
- B. Protons
- C. Neutrons
- D. Nucleus

Answer: B. Protons

Protons have a positive charge; electrons have a negative charge; and neutrons are neutral, meaning they have no charge.

129. In the following equation, what does **G** represent?
(Rigorous) (Skill 22.2)

$$F_{\text{gravity}} = G \frac{m_1 m_2}{d^2}$$

- A. The distance between the two masses
- B. The universal gravitational constant
- C. Coulomb's constant
- D. The speed of the object

Answer: B. The universal gravitational constant

The force of gravity is the force that causes objects to fall to Earth. We can feel the force of gravity when we lift something up. The force of gravity also keeps the Moon rotating around Earth and Earth rotating around the Sun. The universal law of gravity states that there is a gravitational attraction between all objects on Earth determined by the equation:

$$F_{\text{gravity}} = G \frac{m_1 m_2}{d^2}$$

where G is the universal gravitational constant and d is the distance between the two masses. Coulomb's constant relates to electrostatic forces between two objects and speed, or velocity.

130. The theory of seafloor spreading explains _____.
(Rigorous) (Skill 23.1)

- A. The shapes of the continents
- B. How continents got named
- C. How continents move apart
- D. How continents sink to become part of the ocean floor

Answer: C. How continents move apart

In the theory of seafloor spreading, the movement of the ocean floor causes continents to spread apart from one another. This occurs because crustal plates split apart, and new material is added to the plate edges. This process pulled the continents apart and may create new separations; it is believed to have caused the formation of the Atlantic Ocean.

**131. Which of the following types of rock are made from magma?
(Rigorous) (Skill 23.3)**

- A. Fossils
- B. Sedimentary
- C. Metamorphic
- D. Igneous

Answer: D. Igneous

Igneous rocks are formed from magma, and magma is so hot that any organisms trapped by it are destroyed. Metamorphic rocks are formed by high temperatures and great pressures. When fluid sediments are transformed into solid sedimentary rocks, the process is known as lithification.

**132. What is the most accurate description of the water cycle?
(Rigorous) (Skill 23.4)**

- A. Rain comes from clouds, filling the ocean. The water then evaporates and becomes clouds again.
- B. Water circulates from rivers into groundwater and back, while water vapor circulates in the atmosphere.
- C. Water is conserved and, except for chemical or nuclear reactions, any drop of water could circulate through clouds, rain, groundwater, and surface water.
- D. Weather systems cause chemical reactions to break water into its atoms.

Answer: C. Water is conserved and, except for chemical or nuclear reactions, any drop of water could circulate through clouds, rain, groundwater, and surface water.

133. The transfer of heat by electromagnetic waves is called _____ .
(Rigorous) (Skill 23.5)

- A. Conduction
- B. Convection
- C. Phase change
- D. Radiation

Answer: D. Radiation

Heat transfer via electromagnetic waves (which can occur even in a vacuum) is called radiation. Heat can also be transferred by direct contact (conduction), by fluid current (convection), and by matter changing phase, but these are not relevant here. The answer to this question is therefore D.

134. Which of the following is the best definition of meteorite?
(Rigorous) (Skill 23.6)

- A. A meteorite is a mineral composed of mica and feldspar.
- B. A meteorite is material from outer space that has struck the Earth's surface
- C. A meteorite is an element that has properties of both metals and nonmetals.
- D. A meteorite is a very small unit of length measurement.

Answer: B. A meteorite is material from outer space that has struck the Earth's surface.

Meteoroids are pieces of matter in space, composed of particles of rock and metal. If a meteoroid travels through the Earth's atmosphere, friction causes burning and a shooting star, i.e., a meteor. If the meteor strikes the Earth's surface, it is called a meteorite. Note that although the suffix *-ite* often indicates a mineral, choice A is incorrect. Choice C refers to a "metalloid" rather than a meteorite, and choice D is simply a misleading pun on "mete." Therefore, the correct answer is B.

**135. The most abundant gas in the atmosphere is:
(Rigorous) (Skill 23.6)**

- A. Oxygen
- B. Nitrogen
- C. Carbon dioxide
- D. Methane

Answer: B. Nitrogen

Nitrogen accounts for 78.09 percent of the atmosphere; oxygen, 20.95 percent; carbon dioxide, 0.03 percent; and there is no methane in the atmosphere.

**136. All of the following are natural resources EXCEPT:
(Average) (Skill 23.10)**

- A. Trees
- B. Coal
- C. Fish
- D. Paper

Answer: D. Paper

A natural resource is something that is found in nature, and though trees are found in nature, paper is not.

137. Which kingdom comprises organisms made of one cell with no nuclear membrane?

(Rigorous) (Skill 24.2)

- A. Monera
- B. Protista
- C. Fungi
- D. Algae

Answer: A. Monera

To answer this question, first note that algae are not a kingdom of their own. Some algae are in monera, the kingdom that consists of unicellular prokaryotes with no true nucleus. Protista and fungi are both eukaryotic, with true nuclei, and are sometimes multicellular.

138. What cell organelle contains the cell's stored food?

(Average) (Skill 24.3)

- A. Vacuoles
- B. Golgi apparatus
- C. Ribosomes
- D. Lysosomes

Answer: A. Vacuoles

In a cell, the subparts are called organelles. The vacuoles are the organelles that hold stored food (and water and pigments). The Golgi apparatus sorts molecules from other parts of the cell; the ribosomes are sites of protein synthesis; the lysosomes contain digestive enzymes.

139. The peripheral nervous system consists of:
(Average) (Skill 24.6)

- A. Nerves
- B. Large organs
- C. The eyes
- D. None of the above

Answer: A. Nerves

The peripheral nervous system refers to the nerves that reach all parts of the body, sending messages back to the brain.

140. Enzymes speed up reactions by _____ .
(Rigorous) (Skill 24.6)

- A. Utilizing ATP
- B. Lowering pH, allowing reaction speed to increase
- C. Increasing volume of substrate
- D. Lowering energy of activation

Answer: D. Lowering energy of activation

Because enzymes are catalysts, they work the same way—they cause the formation of activated chemical complexes, which require a lower activation energy. ATP is an energy source for cells, and pH or volume changes may or may not affect reaction rate, so these answers can be eliminated.

141. _____ is a tough band of fibrous connective tissue that connects muscle to bone or muscle to muscle.

(Rigorous) (Skill 24.6)

- A. A joint
- B. A tendon
- C. A ligament
- D. Cartilage

Answer: B. A tendon

A joint connects bones to bones, while a tendon connects muscles to bones or other muscles. A ligament connects bones to other bones to form a joint. Finally, cartilage is not a connective tissue.

142. Identify the correct sequence of organization of living things from lower to higher order:

(Rigorous) (Skill 24.8)

- A. Cell, organelle, organ, tissue, system, organism
- B. Cell, tissue, organ, organelle, system, organism
- C. Organelle, cell, tissue, organ, system, organism
- D. Organelle, tissue, cell, organ, system, organism

Answer: C. Organelle, cell, tissue, organ, system, organism

Organelles are parts of the cell; cells make up tissue, which makes up organs. Organs work together in systems (e.g., the respiratory system), and the organism is the living thing as a whole.

143. Which of the following is a correct explanation of evolution?
(Rigorous) (Skill 24.9)

- A. Giraffes need to reach higher for leaves to eat so their necks stretch. The giraffe babies are then born with longer necks. Eventually, there are more long-necked giraffes in the population.
- B. Giraffes with longer necks are able to reach more leaves, so they eat more and have more babies than other giraffes. Eventually, there are more long-necked giraffes in the population.
- C. Giraffes want to reach higher for leaves to eat, so they release enzymes into their bloodstream, which in turn causes fetal development of longer-necked giraffes. Eventually, there are more long-necked giraffes in the population.
- D. Giraffes with long necks are more attractive to other giraffes, so they get the best mating partners and have more babies. Eventually, there are more long-necked giraffes in the population.

Answer: B. Giraffes with longer necks are able to reach more leaves, so they eat more and have more babies than other giraffes. Eventually, there are more long-necked giraffes in the population.

Although evolution is often misunderstood, it occurs via natural selection. Organisms with a life/reproductive advantage produce more offspring. Over many generations, this changes the proportions in the population. In any case, it is impossible for a stretched neck or a fervent desire to result in a biological mutation. Although there are traits that are naturally selected because of mate attractiveness and fitness, this is not the primary situation here, so choice B is the answer.

144. What is the scientific method?
(Average) (Skill 25.1)

- A. The process of doing an experiment and writing a laboratory report
- B. The process of using open inquiry and repeatable results to establish theories
- C. The process of reinforcing scientific principles by confirming results
- D. The process of recording data and observations

Answer: B. The process of using open inquiry and repeatable results to establish theories

Scientific research often includes elements from answers, but the basic underlying principle of the scientific method is that people ask questions and do repeatable experiments to answer those questions and develop informed theories about why and how things happen.

145. Which of the following is NOT considered ethical behavior for a scientist?
(Average) (Skill 25.1)

- A. Using unpublished data and citing the source
- B. Publishing data before other scientists have had a chance to replicate results
- C. Collaborating with other scientists from different laboratories
- D. Publishing work with an incomplete list of citations

Answer: D. Publishing work with an incomplete list of citations

One of the most important ethical principles for scientists is to cite all sources of data and analysis when publishing work. It is acceptable to use unpublished data as long as the source is cited. Most scientific work is published before other scientists replicate it, and frequently scientists collaborate with each other, in the same or different laboratories. These are all ethical choices. However, publishing work without the appropriate citations is unethical.

146. In an experiment measuring the growth of bacteria at different temperatures, what is the independent variable?
(Rigorous) (Skill 25.1)

- A. Number of bacteria
- B. Growth rate of bacteria
- C. Temperature
- D. Size of bacteria

Answer: C. Temperature

To answer this question, recall that the independent variable in an experiment is the entity that is changed by the scientist in order to observe the effects of the dependent variable(s). In this experiment, temperature is changed in order to measure growth of bacteria, so C is the answer. Note that choice A is the dependent variable, and neither B nor D is directly relevant to the question.

147. Which is the correct order of methodology?
(Average) (Skill 25.2)

- 1. Collecting data
 - 2. Planning a controlled experiment
 - 3. Drawing a conclusion
 - 4. Hypothesizing a result
 - 5. Revisiting a hypothesis to answer a question
- A. 1, 2, 3, 4, 5
 - B. 4, 2, 1, 3, 5
 - C. 4, 5, 1, 3, 2
 - D. 1, 3, 4, 5, 2

Answer: B. 4, 2, 1, 3, 5

The correct methodology for the scientific method is first to make a meaningful hypothesis (educated guess), then to plan and execute a controlled experiment to test that hypothesis. Using the data collected in that experiment, the scientist then draws conclusions and attempts to answer the original question related to the hypothesis.

**148. Which of the following data sets is properly represented by a bar graph?
(Average) (Skill 25.2)**

- A. Number of people choosing to buy cars versus color of car bought
- B. Number of people choosing to buy cars versus age of car customer
- C. Number of people choosing to buy cars versus distance from car lot to customer home
- D. Number of people choosing to buy cars versus time since last car purchase

Answer: A. Number of people choosing to buy cars versus color of car bought

A bar graph should be used only for data sets in which the independent variable is noncontinuous (discrete), e.g., gender or color. Any continuous independent variable (e.g., age, distance, or time) should yield a scatter plot when the dependent variable is plotted.

**149. Chemicals should be stored:
(Easy) (Skill 25.4)**

- A. In the principal's office
- B. In a dark room
- C. According to their reactivity with other substances
- D. In a double-locked room

Answer: C. According to their reactivity with other substances

Chemicals should be stored with other chemicals with similar properties (e.g., acids with other acids), to reduce the potential for either hazardous reactions in the storeroom or mistakes in reagent use. Chemicals should never be stored in anyone's office, and the light intensity of the room is not very important because light-sensitive chemicals are usually stored in dark containers. In fact, good lighting is desirable in a storeroom so that labels can be read easily. Chemicals can be stored offsite, but that makes it inconvenient to use them.

150. Accepted procedures include preparing solutions with _____ .
(Rigorous) (Skill 25.4)

- A. Alcohol
- B. Hydrochloric acid
- C. Distilled water
- D. Tap water

Answer: C. Distilled water

Alcohol and hydrochloric acid should never be used to make solutions unless one is specifically instructed to do so. All solutions should be made with distilled water, since tap water contains dissolved particles which may affect the results of an experiment.

151. Issues such as cloning and genetic engineering fall in the area of:
(Average) (Skill 26.1)

- A. Biology
- B. Technology
- C. Chemistry
- D. Biotechnology

Answer: D. Biotechnology

Both biology and technology are involved in the research and implementation of cloning and genetic engineering.

152. Bunsen burners, graphing calculators, computers, and multimedia are examples of:
(Average) (Skill 26.1)

- A. Technology used in science
- B. No specific grouping
- C. Items used only in high school programs
- D. All of the above

Answer: A. Technology used in science

The listed items are included in the grouping of technology used in science. They are not limited to use at the high school level.

153. Which of the following is controlled by the researcher?
(Average) (Skill 26.2)

- A. An independent variable
- B. A dependent variable
- C. A control
- D. A live specimen

Answer: A. An independent variable

An independent variable is manipulated by the researcher during experiments when the dependent variable (control) remains the same. An experiment may or may not use a live specimen.

MATHEMATICS

154. An item that sells for \$375.00 is put on sale at \$120.00. What is the percentage of decrease?
(Average) (Skill 28.3)

- A. 25%
- B. 28%
- C. 68%
- D. 34%

Answer: C. 68%

Use $(1 - x)$ as the discount. $375x = 120$.

$375(1 - x) = 120 \rightarrow 375 - 375x = 120 \rightarrow 375x = 255 \rightarrow x = 0.68 = 68\%$

which is answer C.

**155. A sofa sells for \$520.00. If the retailer makes a 30% profit, what was the wholesale price?
(Average) (Skill 28.3)**

- A. \$400.00
- B. \$676.00
- C. \$490.00
- D. \$364.00

Answer: A. \$400.00

Let x be the wholesale price, then $x + .30x = 520$, $1.30x = 520$. Divide both sides by 1.30.

**156. In similar polygons, if the perimeters are in a ratio of $x:y$, the sides are in a ratio of:
(Average) (Skill 28.3)**

- A. $x:y$
- B. $x^2:y^2$
- C. $2x:y$
- D. $1/2 x:y$

Answer: A. $x:y$

The sides are in the same ratio.

**157. Choose the set in which the members are not equivalent.
(Average) (Skill 28.4)**

- A. $1/2$, 0.5, 50%
- B. $10/5$, 2.0, 200%
- C. $3/8$, 0.385, 38.5%
- D. $7/10$, 0.7, 70%

Answer: C. $3/8$, 0.385, 38.5%

$3/8$ is equivalent to .375 and 37.5%

158. 0.16 is equivalent to:
(Average) (Skill 28.4)

- A. 16
- B. 16%
- C. 16/10
- D. 1.6

Answer: B: 16%

0.16 is equivalent to 16% because 16% is 16/100.

159. Which of the following is an irrational number?
(Rigorous) (Skill 28.4)

- A. .362626262...
- B. $4\frac{1}{3}$
- C. $\sqrt{5}$
- D. $-\sqrt{16}$

Answer: C. $\sqrt{5}$

Irrational numbers are real numbers that cannot be written as the ratio of two integers, such as infinite nonrepeating decimals. $\sqrt{5}$ fits this description; the others do not.

160. The number 0 is a member of all of the following groups of numbers EXCEPT:
(Rigorous) (Skill 28.4)

- A. Whole numbers
- B. Real numbers
- C. Natural numbers
- D. Integers

Answer: C. Natural numbers

The number zero is a whole number, real number, and integer, but the natural numbers (also known as the counting numbers) start with the number one, not zero.

161. $\left(\frac{-4}{9}\right) + \left(\frac{-7}{10}\right) =$
(Easy) (Skill 28.5)

- A. $\frac{23}{90}$
- B. $\frac{-23}{90}$
- C. $\frac{103}{90}$
- D. $\frac{-103}{90}$

Answer: D. $\frac{-103}{90}$

Find the lowest common denominator of $\frac{-4}{9}$ and $\frac{-7}{10}$. The lowest common denominator is 90, so you get $\frac{-40}{90} + \frac{-63}{90} = \frac{-103}{90}$, so the answer is D.

162. Look at this number: 4,087,361
 What number represents the ten-thousands place?
(Easy) (Skill 28.5)

- A. 4
- B. 6
- C. 0
- D. 8

Answer: D. 8
 The ten-thousands place is the number 8.

**163. The correct order of mathematical operations is the following:
(Average) (Skill 28.5)**

- A. Simplify inside grouping characters such as parentheses, brackets, square roots, fraction bars, etc.; multiply expressions with exponents; do multiplication or division, from left to right; do addition or subtraction, from left to right.
- B. Do multiplication or division, from left to right; simplify inside grouping characters such as parentheses, brackets, square roots, fraction bars, etc.; multiply expressions with exponents; do addition or subtraction, from left to right.
- C. Simplify inside grouping characters such as parentheses, brackets, square roots, fraction bars, etc.; do addition or subtraction, from left to right; multiply expressions with exponents; do multiplication or division, from left to right.
- D. None of the above.

Answer: A. Simplify inside grouping characters such as parentheses, brackets, square roots, fraction bars, etc.; multiply expressions with exponents; do multiplication or division, from left to right; do addition or subtraction, from left to right.

When facing a mathematical problem that requires all mathematical properties to be performed first, you do the math within the parentheses, brackets, square roots, or fraction bars. Then you multiply out expressions with exponents. Next, you do multiplication or division. Finally, you do addition or subtraction.

**164. Given even numbers x and y , which could be the least common multiple of x and y ?
(Rigorous) (Skill 28.5)**

- A. $xy/2$
- B. $2xy$
- C. $4xy$
- D. xy

Answer: A. $xy/2$

Although choices B, C, and D are common multiples, when both numbers are even, the product can be divided by 2 to obtain the least common multiple.

165. $(5.6) \times (-0.11) =$
(Average) (Skill 28.6)

- A. -0.616
- B. 0.616
- C. -6.110
- D. 6.110

Answer: A. -0.616

Simple multiplication. The answer is negative because a positive multiplied by a negative is a negative number. $5.6 \times -0.11 = -0.616$, which is answer A.

166. Solve for x: $|2x + 3| > 4$
(Rigorous) (Skill 28.6)

- A. $-\frac{7}{2} > x > \frac{1}{2}$
- B. $-\frac{1}{2} > x > \frac{7}{2}$
- C. $x < \frac{7}{2}$ or $x < -\frac{1}{2}$
- D. $x < -\frac{7}{2}$ or $x > \frac{1}{2}$

Answer: D: $x < -\frac{7}{2}$ or $x > \frac{1}{2}$

The quantity within the absolute value bars must be either > 4 or < -4 . Solve the two inequalities $2x + 3 > 4$ or $2x + 3 < -4$.

167. What is the greatest common factor of 16, 28, and 36?
(Easy) (Skill 28.7)

- A. 2
- B. 4
- C. 8
- D. 16

Answer: B. 4

The smallest number in this set is 16; its factors are 1, 2, 4, 8, and 16. Sixteen is the largest factor, but it does not divide into 28 or 36. Neither does 8. Four does factor into both 28 and 36.

168. Which set illustrates a function?
(Average) (Skill 28.8)

- A. $\{ (0,1) (0, 2) (0, 3) (0, 4) \}$
- B. $\{ (3, 9) (-3, 9) (4,16) (-4, 16)\}$
- C. $\{ (1, 2) (2, 3) (3, 4) (1, 4) \}$
- D. $\{ (2, 4) (3, 6) (4, 8) (4, 16) \}$

Answer: B. $\{ (3, 9) (-3, 9) (4, 16) (-4, 16)\}$

Each number in the domain can only be matched with one number in the range. Choice A is not a function because 0 is mapped to four different numbers in the range. In choice C, 1 is mapped to two different numbers. In choice D, 4 is also mapped to two different numbers.

169. _____ lines do NOT intersect.
(Easy) (Skill 29.1)

- A. Perpendicular
- B. Parallel
- C. Intersecting
- D. Skew

Answer: B. Parallel

Parallel lines continue at equal distance apart indefinitely. The other choices all intersect at some point.

170. _____ lines intersect at right angles to each other.
(Easy) (Skill 29.1)

- A. Perpendicular
- B. Parallel
- C. Intersecting
- D. Skew

Answer: A. Perpendicular

Perpendicular lines form a 90 degree angle at their point of intersection with each other.

171. All of the following are examples of obtuse angles EXCEPT:
(Average) (Skill 29.1)

- A. 110 degrees
- B. 90 degrees
- C. 135 degrees
- D. 91 degrees

Answer: B. 90 degrees

A 90-degree angle is not obtuse; it is a right angle.

**172. Which angle would measure less than 90 degrees?
(Average) (Skill 29.1)**

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

Answer: A. Acute

Acute angles measure less than 90 degrees. Obtuse angles measure greater than 90 degrees and less than 180 degrees. Right angles measure 90 degrees, and straight angles measure 180 degrees.

**173. Find the area of a rectangle if you know that the base is 8 cm and the diagonal of the rectangle is 8.5 cm:
(Rigorous) (Skill 29.1)**

- A. 24 cm²
- B. 30 cm²
- C. 18.9 cm²
- D. 24 cm

Answer: A. 24 cm²

The correct answer is A because the base of the rectangle is also one leg of the right triangle, and the diagonal is the hypotenuse of the triangle. To find the other leg of the triangle you can use the Pythagorean Theorem. Once you get the other leg of the triangle, that is also the height of the rectangle. To get the area, multiply the base by the height. The reason the correct answer is A, not D, is because area is measured in centimeters squared, not just centimeters.

174. If the radius of a right circular cylinder is doubled, how does its volume change?

(Rigorous) (Skill 29.2)

- A. No change
- B. Also doubles
- C. Four times the original
- D. Pi times the original

Answer: C. Four times the original

If the radius of a right circular cylinder is doubled, the volume is multiplied by 4 because in the formula, the radius is squared. Therefore, the new volume is 2×2 , or four times the original.

175. If a right triangle has legs with the measurements of 3 cm and 4 cm, what is the measure of the hypotenuse?

(Average) (Skill 29.3)

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

Answer: D. 5 cm

If you use the Pythagorean theorem, you will get 5 cm for the hypotenuse leg.

176. Find the midpoint of (2, 5) and (7, -4).

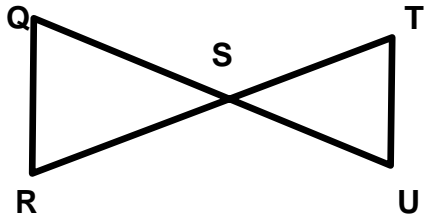
(Average) (Skill 29.3)

- A. (9, -1)
- B. (5, 9)
- C. (9/2, -1/2)
- D. (9/2, 1/2)

Answer: D. (9/2, 1/2)

Using the midpoint formula, $x = (2 + 7)/2$ $y = (5 + -4)/2$

177. Given $QS \cong TS$ and $RS \cong US$, prove $\triangle QRS \cong \triangle TUS$.
(Rigorous) (Skill 29.3)



- | | |
|--|----------|
| 1) $QS \cong TS$ | 1) Given |
| 2) $RS \cong US$ | 2) Given |
| 3) $\angle TSU \cong \angle QSR$ | 3) ? |
| 4) $\triangle TSU \cong \triangle QSR$ | 4) SAS |

Give the reason that justifies step 3.

- A. Congruent parts of congruent triangles are congruent
- B. Reflexive axiom of equality
- C. Alternate interior angle theorem
- D. Vertical angle theorem

Answer: D. Vertical angle theorem

Angles formed by intersecting lines are called vertical angles and are congruent.

178. Given segment AC, with B as its midpoint, find the coordinates of C if A = (5, 7) and B = (3, 6.5).
(Rigorous) (Skill 29.4)

- A. (4, 6.5)
- B. (1, 6)
- C. (2, 0.5)
- D. (16, 1)

Answer: B. (1, 6)

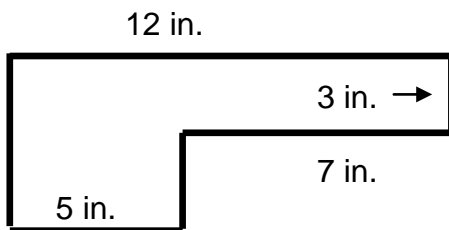
179. Three-dimensional figures in geometry are called:
(Easy) (Skill 29.6)

- A. Solids
- B. Cubes
- C. Polygons
- D. Blocks

Answer: A. Solids

Three-dimensional figures are referred to as solids. Cubes and blocks are types of solids. A polygon is a plane,

180. Find the area of the figure below.
(Rigorous) (Skill 29.7)



- A. 56 in.²
- B. 27 in.²
- C. 71 in.²
- D. 170 in.²

Answer: A. 56 in.²

Divide the figure into two rectangles with a horizontal line. The area of the top rectangle is 36 inches, and the bottom is 20 inches.

**181. What is the area of a square whose side is 13 feet?
(Rigorous) (Skill 29.8)**

- A. 169 feet
- B. 169 square feet
- C. 52 feet
- D. 52 square feet

Answer: B. 169 square feet

Area = length times width (lw).

Length = 13 feet

Width = 13 feet (square, so length and width are the same)

Area = square feet

Area is measured in square feet so the correct answer is B.

**182. What measure could be used to report the distance traveled in walking
around a track?
(Easy) (Skill 29.10)**

- A. Degrees
- B. Square meters
- C. Kilometers
- D. Cubic feet

Answer: C. Kilometers

Degrees measure angles, square meters measure area, cubic feet measure volume, and kilometers measure length. Kilometers is the only reasonable answer.

183. The mass of a cookie is closest to:
(Easy) (Skill 29.10)

- A. 0.5 kg
- B. 0.5 grams
- C. 15 grams
- D. 1.5 grams

Answer: C. 15 grams

Science utilizes the metric system, and mass (the amount of matter in an object) is measured in grams. A common estimation of mass used in elementary schools is that a paperclip has a mass of approximately one gram, which eliminates choices B and D, as they are very close to 1 gram. A common estimation of one kilogram is that it is equal to one liter of water. Half a liter of water is still greater than the mass of one cookie, eliminating choice A. Therefore, the best estimation of the mass of one cookie is narrowed to 15 grams, or choice C.

184. A boat travels 30 miles upstream in three hours. It makes the return trip in one and a half hours. What is the speed of the boat in still water?
(Average) (Skill 30.1)

- A. 10 mph
- B. 15 mph
- C. 20 mph
- D. 30 mph

Answer: B. 15 mph

Let x = the speed of the boat in still water and c = the speed of the current.

	Rate	Time	Distance
Upstream	$x - c$	3	30
Downstream	$x + c$	1.5	30

Solve:

$$3x - 3c = 30$$

$$1.5x + 1.5c = 30$$

185. Given the formula $d = rt$, (where d = distance, r = rate, and t = time), calculate the amount of time required for a vehicle to travel 585 miles at a rate of 65 miles per hour.

(Average) (Skill 30.1)

- A. 8.5 hours
- B. 6.5 hours
- C. 9.5 hours
- D. 9 hours

Answer: D. 9 hours

We are given $d = 585$ miles, $r = 65$ miles per hour, and $d = rt$. Solve for t . hours, so the answer is D.

186. Two mathematics classes have a total of 410 students. The 8:00 a.m. class has 40 more than the 10:00 a.m. class. How many students are in the 10:00 a.m. class?

(Average) (Skill 30.4)

- A. 123.3
- B. 370
- C. 185
- D. 330

Answer: C: 185

Let x = the number of students in the 8 A.M. class and $x - 40$ = the number of student in the 10 A.M. class. So there are 225 students in the 8 A.M. class, and $225 - 40 = 185$ in the 10 A.M. class, which is answer C.

187. Solve for both x and y :

$$3x + 2y = 12$$

$$12x + 8y = 15$$

(Rigorous) (Skill 30.4)

- A. All real numbers
- B. $x = 4, y = 4$
- C. $x = 2, y = -1$
- D. \emptyset

Answer: D. \emptyset

Multiplying the top equation by -4 and adding results in the equation $0 = -33$. Since this is a false statement, the correct choice is the null set.

188. What is the absolute value of the number -5 ?

(Rigorous) (Skill 30.4)

- A. -5
- B. 10
- C. $1/5$
- D. 5

Answer: D. 5

The absolute value is how far on a number line the number is from zero.

189. Which of the following is an example of the associative property?

(Average) (Skill 30.5)

- A. $a(b + c) = ab + bc$
- B. $a + 0 = a$
- C. $(a + b) + c = a + (b + c)$
- D. $a + b = b + a$

Answer: C. $(a + b) + c = a + (b + c)$

The associative property is when the parentheses in a problem are switched.

190. Find the median of the following set of data:
(Easy)(Skill 31.1)

14 3 7 6 11 20

- A. 9
- B. 8.5
- C. 7
- D. 11

Answer: A. 9

Place the numbers in ascending order: 3 6 7 11 14 20. Find the average of the middle two numbers $(7+11) \div 2 = 9$.

191. Corporate salaries are listed for several employees. Which would be the best measure of central tendency?
(Average) (Skill 31.1)

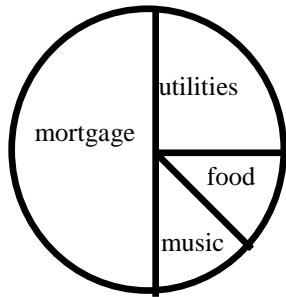
\$24,000 \$24,000 \$26,000 \$28,000 \$30,000 \$120,000

- A. Mean
- B. Median
- C. Mode
- D. No difference

Answer: B. Median

The median provides the best measure of central tendency in this case where the mode is the lowest number and the mean would be disproportionately skewed by the outlier, \$120,000.

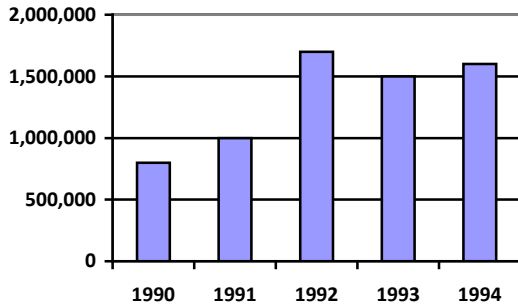
192. Which statement is true about George's budget?
(Easy) (Skill 31.2)



- A. George spends the greatest portion of his income on food
- B. George spends twice as much on utilities as he does on his mortgage
- C. George spends twice as much on utilities as he does on food
- D. George spends the same amount on food and utilities as he does on mortgage

Answer: C. George spends twice as much on utilities as he does on food

193. The following chart shows the yearly average number of international tourists visiting Palm Beach for 1990-1994. How many more international tourists visited Palm Beach in 1994 than in 1991?
(Rigorous) (Skill 31.2)



- A. 100,000
- B. 600,000
- C. 1,600,000
- D. 8,000,000

Answer: B. 600,000

The number of tourists in 1991 was 1,000,000, and the number in 1994 was 1,600,000. Subtract to get a difference of 600,000, which is choice B.

194. In probability, the sample space represents:
(Average) (Skill 31.3)

- A. An outcome to an experiment
- B. All possible outcomes of an experiment
- C. The amount of times you must flip a coin
- D. The amount of room needed to conduct an experiment

Answer: B. all possible outcomes of an experiment

In probability theory, the **sample space** is a list of all possible outcomes of an experiment. For example, the sample space of tossing two coins is the set {HH, HT, TT, TH}, where H is heads and T is tails, and the sample space of rolling a six-sided die is the set {1, 2, 3, 4, 5, 6}.

195. What is the probability of drawing two consecutive aces from a standard deck of cards?

(Rigorous) (Skill 31.3)

- A. $\frac{3}{51}$
- B. $\frac{1}{221}$
- C. $\frac{2}{104}$
- D. $\frac{2}{52}$

Answer: B. $\frac{1}{221}$

$$P(\text{first ace}) = \frac{4}{52}. P(\text{second ace}) = \frac{3}{51}.$$

$$P(\text{first ace and second ace}) = P(\text{one ace}) \times P(\text{second ace} \mid \text{first ace}) \\ = \frac{4}{52} \times \frac{3}{51} = \frac{1}{221}. \text{ This is answer B.}$$

196. Given a drawer with five black socks, three blue socks, and two red socks, what is the probability that you will draw two black socks in two drawers in a dark room?

(Rigorous) (Skill 31.3)

- A. $\frac{2}{9}$
- B. $\frac{1}{4}$
- C. $\frac{17}{18}$
- D. $\frac{1}{18}$

Answer: A. 2/9

In this example of conditional probability, the probability of drawing a black sock on the first draw is $\frac{5}{10}$. It is implied in the problem that there is no replacement; therefore, the probability of obtaining a black sock in the second draw is $\frac{4}{9}$. Multiply the two probabilities and reduce to lowest terms.

197. What is NOT one of the advantages of collaborative or cooperative learning?
(Average) (Skill 32.1)

- A. Students who work together in groups or teams develop their skills in organizing, leadership, research, communication, and problem solving.
- B. Working in teams can help students overcome anxiety in distance learning courses and contribute a sense of community and belonging for the students.
- C. Students tend to learn more material and retain the information longer than when the same information is taught using different methods.
- D. Teachers reduce their workloads and the amount of time spent on individuals, assignments, and grading.

Answer: D. Teachers reduce their workloads and the amount of time spent on individuals, assignments, and grading.

Teachers continue to expend time planning, monitoring, and evaluating students, their groups, and their activities.

198. Alternative assessment in math may include:
(Rigorous) (Skill 32.1)

- A. Student explanation of reasoning behind the answer
- B. Analysis of data
- C. Multimedia
- D. All of the above

Answer: D. All of the above

The question asks about alternative assessment so any of the choices could be used instead of a traditional paper-and-pencil test.

**199. Why are manipulatives, models, and technology used by math teachers?
(Rigorous) (Skill 32.2)**

- A. To promote interest
- B. To address diverse learning needs
- C. To give hands-on math experience
- D. All of the above

Answer: D. All of the above

Some students show more interest in or have a need for concrete, hands-on experience. Manipulatives, models, and technology offer ways to address that in math.

**200. Open-ended questions, portfolios, and writing activities can:
(Rigorous) (Skill 32.3)**

- A. Only be used in early childhood assessment
- B. Be used as assessment of mathematical skill and knowledge
- C. Only be used for language arts assessment
- D. None of the above

Answer: B. Be used as assessment of mathematical skill and knowledge

The key word in choices A and C is *only*, which implies that open-ended questions, portfolios, and writing activities would only apply to assessment in early childhood or language arts. The best choice for this question is B.