TEST INSTRUCTIONS

It's important to become familiar with the instructions for the test now, so that you don't waste time figuring them out on test day.

General Instructions

Each exam consists of six sections—two Analytical Writing sections, two Verbal Reasoning sections, and two Quantitative Reasoning sections. The Analytical Writing sections will always be first. The Verbal and Quantitative Reasoning sections may appear in any order. You will have 35 minutes for each Analytic Writing section, 30 minutes for each Verbal, and 35 minutes for each Quantitative Reasoning section. If desired, you may take a 10-minute break after Section 4. Remember that during the actual test, there may be an additional verbal or quantitative experimental section.

Section 1	30 minutes	Critical Thinking and Analytical Writing
Section 2	30 minutes	Critical Thinking and Analytical Writing
Section 3	30/35 minutes	Verbal or Quantitative Reasoning
Section 4	30/35 minutes	Verbal or Quantitative Reasoning
Section 5	30/35 minutes	Verbal or Quantitative Reasoning
Section 6	30/35 minutes	Verbal or Quantitative Reasoning

When taking a Verbal or Quantitative Reasoning section, you are free to skip questions that you might have difficulty answering and come back to them later during the time allotted for that section. You may also change your response to any question in a section during the time allotted to work on that section. You may not go back to an earlier section of the test after time for that section runs out.

Analytic Writing Instructions

Issue Topic

You will be given a brief statement on an issue of general interest and specific instructions on how to respond to that issue. You will have 30 minutes to plan and write a response in which you develop a position on the issue. Make sure that you respond to the specific instructions and support your position on the issue with reasons and examples drawn from such areas as your reading, experience, observations, and/or academic studies.

Before you begin writing, you may want to think for a few minutes about the passage and the instructions and then outline your response. Be sure to develop your analysis fully and organize it coherently. Leave a minute or two at the end to reread what you have written and make any revisions you think are necessary.

Argument Topic

You will be given a short passage that presents an argument, or an argument to be completed, and specific instructions on how to respond to that passage. You will have 30 minutes to plan and write a response in which you analyze the passage. Note that you are NOT being asked to present your own views on the subject. Make sure that you respond to the specific instructions and support your analysis with relevant reasons and/or examples.

Before you begin writing, you may want to think for a few minutes about the passage and the instructions and then outline your response. Be sure to develop your analysis fully and organize it coherently. Leave a minute or two at the end to reread what you have written and make any revisions you think are necessary.

Verbal Reasoning Instructions

Each Verbal Reasoning section is 30 minutes long and has 20 questions. For some questions, you will be instructed to choose one or more answer choices. The instructions may or may not specify how many answers you must choose. If the number of answers is specified, you must choose all of the correct answers in order to have your response counted as correct. If the number is not specified, choose all that correctly answer the question. No credit will be given if fewer or more than all of the correct answers are chosen.

Quantitative Reasoning Instructions

Each Quantitative Reasoning section is 35 minutes long and has 20 questions. You may use a five-function calculator—one with addition, subtraction, multiplication, division, and square-root features—during Quantitative Reasoning sections.

For some questions, you will be instructed to choose one or more answer choices. The instructions may or may not specify how many answers you must choose. If the number of answers is specified, you must choose all of the correct answers in order to have your response counted as correct. If the number is not specified, choose all that correctly answer the question. No credit will be given if fewer or more than all of the correct answers are chosen.

Some questions will require you to enter your own answer. If the question provides a single response space, enter a single number. You may enter negative signs and decimal points. If the question tells you to round your answer, do so. Otherwise,

enter the entire answer. If the question provides two response spaces, you must enter your answer in the form of a fraction. You are not required to enter fractions in their most reduced form. If there is more than one correct response, you only need to enter one of the correct responses to have your response counted as correct.

Some questions will ask you to fill blanks in the text by clicking to select from a list of choices. Sometimes all of the choices will be used, and sometimes only some of the choices will be used. The correct answer always requires you to put a different choice in every blank.

Note on Numbers and Figures

Numbers: All numbers used are real numbers.

Figures: The position of points, angles, regions, etc. can be assumed to be in the order shown, and angle measures can be assumed to be positive. Lines shown as straight can be assumed to be straight. Figures can be assumed to lie in a plane unless otherwise indicated. Any other figures are not necessarily drawn to scale, unless a note states that a figure is drawn to scale.

Chapter 16
Practice Test 1

SECTION 1: ISSUE TOPIC

Directions:

You will be given a brief quotation that states or implies an issue of general interest and specific instructions on how to respond to that issue. You will have 30 minutes to plan and compose a response in which you develop a position on the issue according to the specific instructions. A response to any other issue will receive a score of zero.

> "Governments are justified in circumventing civil laws when doing so is vital to the protection of national security."

Write an essay in which you take a position on the statement above. In developing and supporting your position, you should consider ways in which the statement might or might not hold true.

SECTION 2: ARGUMENT TOPIC

Directions:

You will be given a short passage that presents an argument, or an argument to be completed, and specific instructions on how to respond to that passage. You will have 30 minutes to plan and compose a response in which you analyze the passage according to the specific instructions. A response to any other argument will receive a score of zero.

Note that you are NOT being asked to present your own views on the subject. Make sure that you respond to the specific instructions and support your analysis with relevant reasons and/or examples.
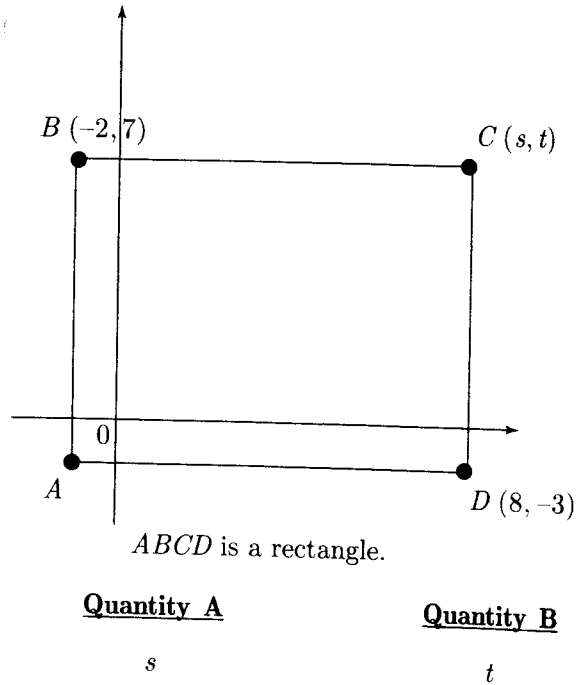
> The following is from a recent email by the Diord Corp. Human Resources Manager: "Tobor Technologies found that mental health problems and mental illness were responsible for about 15 percent of employee sick days. Tobor amended its employee insurance plan so that workers receive the same coverage for mental illness as they do for physical illness. In addition, the company hired an on-site psychologist and created a system that allows workers to schedule confidential counseling appointments. After one year, the number of sick days used by employees declined by 10 percent. Diord Corp has had an increase in employee sick days over the past two years, so we should introduce a similar insurance plan and counseling program. These measures will surely reduce employee absenteeism and cause an increase in productivity."

Write a response in which you examine the argument's unstated assumptions, making sure to explain how the argument depends on the assumptions and what the implications are if the assumptions prove unwarranted.

Questions 1 through 7 each consist of two quantities. Quantity A and Quantity B. You are to compare the two quantities and choose the appropriate answer. In a question, information concerning one or both of the quantities to be compared is centered above the two columns. A symbol that appears in both columns represents the same thing in Quantity A as it does in Quantity B.

1 of 20

$ABCD$ is a rectangle.

Quantity A	Quantity B
s	t

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

2 of 20

A certain punch is created by mixing two parts soda and three parts ice cream. The soda is 4 parts sugar, 5 parts citric acid, and 11 parts other ingredients. The ice cream is 3 parts sugar, 2 parts citric acid, and 15 parts other ingredients.

Quantity A	Quantity B
parts sugar in the punch	parts citric acid in the punch

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

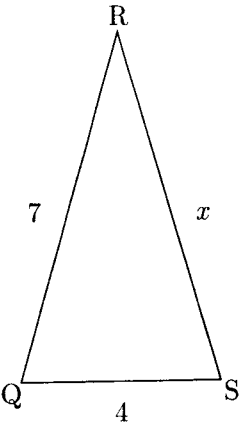○ The relationship cannot be determined from the information given.

3 of 20

The average (arithmetic mean) of a set of mean daily temperatures for x days is 70 degrees. When a mean daily temperature of 75 degrees is added to this set, the average increases to 71 degrees.

Quantity A	Quantity B
x	5

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

4 of 20

QRS is an isosceles triangle

Quantity A	Quantity B
perimeter of QRS	17

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.
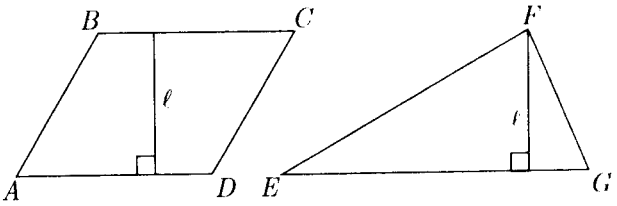
5 of 20

The scores for the 500 students who took Ms. Johnson's final exam had a normal distribution. There were 80 students who scored at least 92 points out of a possible 100 total points and 10 students who scored at or below 56.

Quantity A	Quantity B
The mean score on the final exam	87

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

6 of 20

AB is parallel to CD.

AD is parallel to BC.

$2AD = EG$

Quantity A	Quantity B
The area of $ABCD$	The area of EFG

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

7 of 20

$$(3x - 4y)(3x + 4y) = 2$$

Quantity A	Quantity B
$9x^2 - 16y^2$	4

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

8 of 20

If $8a - 2 = 22$, then $4a - 1 =$

○ 2

○ $\dfrac{11}{4}$

○ 11

○ 12

○ 44

Twenty percent of the sweaters in a store are white. Of the remaining sweaters, 40 percent are brown, and the rest are blue. If there are 200 sweaters in the store, then how many more blue sweaters than white sweaters are in the store?
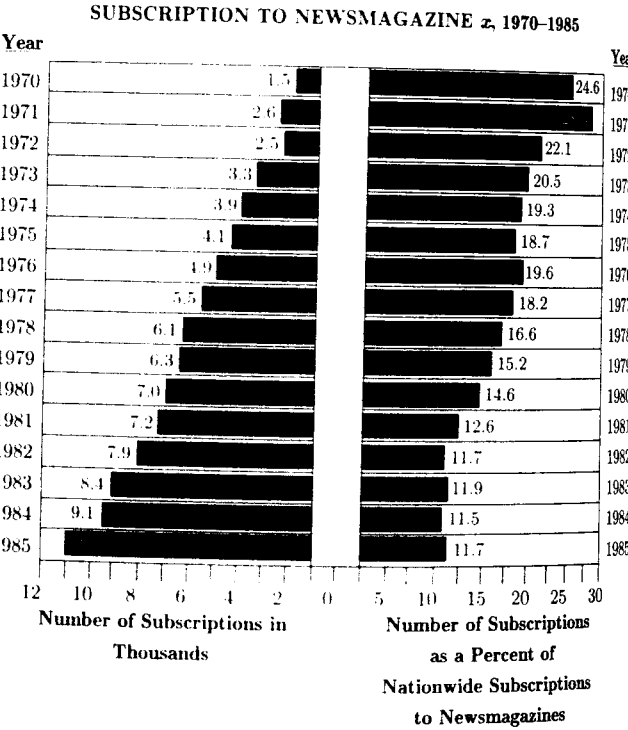
Click on the answer box, then type in a number. Backspace to erase.

$$\frac{4^{13} - 4^{12}}{4^{11}} =$$

- ○ 0
- ○ 1
- ○ 4
- ○ 12
- ○ 16

SUBSCRIPTION TO NEWSMAGAZINE z, 1970–1985

Year	Number of Subscriptions in Thousands	Number of Subscriptions as a Percent of Nationwide Subscriptions to Newsmagazines	Year
1970	1.5	24.6	1970
1971	2.6		1971
1972	2.5	22.1	1972
1973	3.3	20.5	1973
1974	3.9	19.3	1974
1975	4.1	18.7	1975
1976	4.9	19.6	1976
1977	5.5	18.2	1977
1978	6.1	16.6	1978
1979	6.3	15.2	1979
1980	7.0	14.6	1980
1981	7.2	12.6	1981
1982	7.9	11.7	1982
1983	8.4	11.9	1983
1984	9.1	11.5	1984
1985		11.7	1985

Note: Drawn to scale

NATIONWIDE NEWSMAGAZINE SUBSCRIPTIONS: 1972 TO 1984

Newsmagazine	1972	1975	1978	1981	1984
x	2,500	4,100	6,100	7,200	9,100
y	1,700	3,100	4,600	5,700	7,200
z	3,600	5,800	7,600	9,400	11,400
Others	3,500	8,900	18,500	34,700	51,300

For the year in which Newsmagazine x accounted for 14.6 percent of nationwide newsmagazine subscriptions, what was the number of subscriptions to Newsmagazine x ?

- ○ 1,020
- ○ 1,980
- ○ 6,300
- ○ 7,000
- ○ 7,200

In which of the following years did subscriptions to Newsmagazine z account for approximately $\frac{1}{6}$ of the total nationwide magazine subscriptions?

- ○ 1984
- ○ 1981
- ○ 1978
- ○ 1975
- ○ 1972

What was the approximate percent increase in nationwide subscriptions to newsmagazines between 1970 and 1971?

- ○ 4%
- ○ 11%
- ○ 26%
- ○ 51%
- ○ 73%

In 1973, what was the approximate number of subscriptions to newsmagazines nationwide?

- ○ 3,000
- ○ 13,000
- ○ 16,000
- ○ 20,000
- ○ 67,000

If $a = (27)(3^2)$ and $x = (6)(3^1)$, then which of the following is equivalent to $(12)(3^a) \times (15)(2^x)$?

- ○ $-2245 \times 320 \times 5$
- ○ $\frac{2}{5}$
- ○ $\frac{5}{2}$
- ○ $24 \times 38 \times 5$
- ○ $2245 \times 320 \times 5$

Sandy has a husband and 2 children. She brings at least 1 member of her family to a diner for lunch every day. The diner offers 10 lunch specials. If no one orders the same thing, how many different orders can Sandy's family make for lunch?
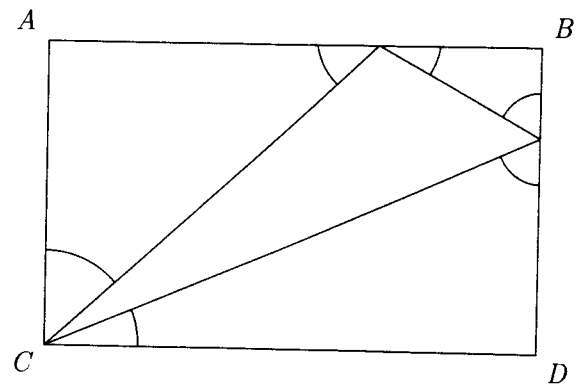
Indicate **all** possible values.

- ☐ 45
- ☐ 90
- ☐ 120
- ☐ 210
- ☐ 720
- ☐ 5,040

Click on your choice(s).

In the figure above, if $ABCD$ is a rectangle, what is the sum of the marked angles?

[ ] degrees

Click on the answer box, then type in a number.
Backspace to erase.

If the probability of choosing 2 red marbles without replacement from a bag of only red and blue marbles is $\frac{3}{55}$ and there are 3 red marbles in the bag, what is the total number of marbles in the bag?

○ 10

○ 11

○ 55

○ 110

○ 165

All first-year students at Red State University must take calculus, English composition, or both. If half of the 2,400 first-year students at Red State University take calculus and half do not, and one-third of those who take calculus also take English composition, how many students take English composition?

○ 400

○ 800

○ 1,200

○ 1,600

○ 2,000

If $\frac{15!}{3^m}$ is an integer, what is the greatest possible value of m ?

○ 4

○ 5

○ 6

○ 7

○ 8

NO TEST MATERIAL ON THIS PAGE

For questions 1 through 4, select one entry for each blank from the corresponding column of choices. Fill all blanks in the way that best completes the text.

1 of 20

Since a large number of the ores frequently located in riverbeds are (i)_____ on the earth's surface, where the processing of chemicals is less costly, recovery of underwater ores is not likely to become a (ii)_____ procedure.

Blank (i)	Blank (ii)
scanty	valuable
abundant	cost-effective
preserved	rejected

Question 2 of 20

It would be (i)_____ for our leaders, given their responsibilities as democratically elected officials, to neglect to do everything they could to (ii)_____ an entirely (iii)_____ problem.

Blank (i)	Blank (ii)	Blank (iii)
irresponsible	forestall	benign
thoughtful	sustain	unimportant
intuitive	cultivate	avoidable

3 of 20

Despite her mentor's advice that she attempt to sound consistently _____ , the graduate student often resorted to using slang when presenting significant parts of her thesis, her habitual speech patterns overriding her years of learning.

lucid
didactic
panegyrical
erudite
rational

4 of 20

Although she felt Steve (i)_____ the subtlety of the delicious stew recipe with his addition of the sweet potato, she thought the pungent onion (ii)_____ the otherwise (iii)_____ taste combination.

Blank (i)	Blank (ii)	Blank (iii)
depleted	exaggerated	delicate
masticated	overwhelmed	zesty
augmented	satiated	detestable

For questions 5 through 6, select one entry for each blank from the corresponding column of choices. Fill all blanks in the way that best completes the text.

5 of 20

At first, a still-life painting can appear quite (i)_____ , its focus on such everyday objects as flowers or fruits apparently uninspired. In the hands of (ii)_____ painter, however, careful attention to slight shifts of color and texture can lead to a truly (iii)_____ and exemplary painting.

Blank (i)	Blank (ii)	Blank (iii)
vital	a gauche	unstinting
luxuriant	an adept	sublime
banal	an ascetic	prosaic

6 of 20

The leaders of Ukraine's "Orange Revolution" were a study in contrasts. At the center of the political storm stood Viktor Yushchenko, his once-handsome face turned into a hideous, (i)_____ mask by dioxin poisoning; but, at his side, no one could miss the (ii)_____ Yulia Tymoshenko, soon to become the world's only prime minister to adorn the covers of fashion magazines.

Blank (i)	Blank (ii)
limpid	bonny
fatuous	decorous
teratoid	felicitous

Questions 7 through 9 are based on the following reading passage.

In analyzing the poetry of Mona Feather, we are confronted with three different yardsticks by which to measure her work. We could consider her poems as the product of a twentieth-century artist in the tradition of James Joyce, T.S. Eliot, and Wallace Stevens. However, to do so would be to ignore a facet of her that informs every word she writes and that stems from her identity as a woman. Yet, to characterize her solely as a woman poet is to deny her cultural heritage, for Mona Feather is also the first modern poet of stature who is also an American Indian.

Stanley Wilson has argued compellingly that the huge popularity Feather enjoys among the Indian reservation school population of the United States is creating a whole new generation of poetry enthusiasts in an age when the reading of poetry is on the wane. While this is undoubtedly true, Mr. Wilson's praise gives the impression that Feather's readership is limited to her own culture—an impression which hints that Mr. Wilson is himself only measuring her by one criterion. Radical feminist writers have long found in Feather's poetry a sense of self-pride which struck a chord with their own more political philosophies. Her imagery, which always made use of the early Native American traditions in which the woman had an important role, was seen as the awakened sensibility of a kindred spirit.

Yet for all the "feminist" touches in her writing, it would be a disservice to consign Feather to the ranks of politicized writers, for her message is deeper than that. The despair that characterized twentieth-century modern poets is to be found in Mona Feather's work as well; she writes of the American Indians of the 1930s confined to ever-shrinking reservations and finds in that a metaphor for all of modern mankind trapped on a shrinking earth of limited resources.

The primary purpose of the passage is to

○ describe the work of Mona Feather

○ compare Feather with Joyce, Eliot, and Stevens

○ show Feather's roots in her Native American heritage

○ argue that Mona Feather's work can be looked at in several different ways

○ discuss the women's movement in America

The passage implies that the author believes Stanley Wilson's view of Feather is

○ a compelling and complete assessment of her work

○ focused too much on her status as a Native American poet

○ meant to disguise his opinion of Feather as a poet lacking in talent

○ critical of Native American children's literary judgment

○ based on all major themes and images in her poetry

The author mentions James Joyce, T.S. Eliot, and Wallace Stevens in order to

○ compare the political messages in Feather's work to those in the work of other authors

○ highlight the radical differences between male and female poets in the twentieth century

○ contrast Feather's thematic choices with those of her contemporaries

○ enumerate a list of artists whose sensibilities made them Feather's kindred spirits

○ describe a critical context in which Feather's work can be analyzed

Questions 10 through 11 are based on the following reading passage.

Among the more interesting elements of etymology is the attempt to derive the meaning of seemingly nonsensical expressions. Take, for instance, the increasingly archaic rural phrase "to buy a pig in a poke." For centuries, the expression has been used to signify the purchase of an item without full knowledge of its condition, and it relates to the common Renaissance practice of securing suckling pigs for transport to market in a poke, or drawstring bag. Unscrupulous sellers would sometimes attempt to dupe purchasers by replacing the suckling pig with a cat, considered worthless at market. An unsuspecting or naïve buyer might fail to confirm the bag's contents; a more **urbane** buyer, though, would be sure to check and—should the seller be dishonest—"let the cat out of the bag."

Consider each of the choices separately and select all that apply.

Which of the following phrases from the passage would help the reader infer the meaning of the word **urbane** as used in context?

☐ "increasingly archaic rural phrase"

☐ "without full knowledge"

☐ "unsuspecting or naïve buyer"

Select a sentence in which the author makes deliberate use of a seemingly nonsensical expression.

*For questions 12 through 15, select the **two** answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole **and** produce completed sentences that are alike in meaning.*

Although she was such a bad-mannered child that she was sent to a boarding school, as an adult she is the very model of _____.

☐ friendliness

☐ diffidence

☐ propriety

☐ reticence

☐ decorum

☐ brashness

Politicians sometimes appear to act in a manner that is almost _____; however, when all the information is released after the fact, it is apparent that they were acting according to a deliberate plan.

☐ pithy

☐ conventional

☐ conformist

☐ whimsical

☐ flawless

☐ capricious

Forced to take an alternate road when a massive oil spill closed the highway, the two-hour detour made their already arduous trip even more _____ .

- ☐ irksome
- ☐ onerous
- ☐ facile
- ☐ glib
- ☐ implacable
- ☐ immutable

Though many of her contemporaries found her odd, Ella Wilkins is now much admired for her _____ spirit, especially her willingness to reject prevailing feminine roles and to travel to foreign lands alone.

- ☐ forlorn
- ☐ magnanimous
- ☐ adventurous
- ☐ bellicose
- ☐ desolate
- ☐ doughty

Microfiber synthetics have been taking the place of natural fibers in an ever-increasing number of clothes because they provide the same durability and deplete fewer natural resources. A shirt made of microfiber synthetics is, however, three times as expensive to produce as a natural-fiber shirt. It follows that the substitution of microfiber synthetic clothes for natural-fiber clothes is, at this time, not recommended from a financial standpoint.

Which of the following statements, if true, most seriously weakens the argument?

- ○ A microfiber synthetic shirt costs one-half the price of a natural-fiber shirt to maintain.
- ○ The production of microfiber synthetic clothes necessitates garment factories to renovate obsolete machinery and to hire extra workers to operate the new machines.
- ○ The upkeep of natural-fiber shirts is far less expensive than the upkeep of any other natural-fiber garment in current production.
- ○ While producers anticipate that the cost of microfiber synthetics will remain stable, they recognize that the advent of recycling programs for natural fibers should bring down the costs of natural fibers.
- ○ The cost of providing stain guards for microfiber synthetic shirts would probably be greater than what garment producers now spend on stain guards for natural-fiber shirts.

Questions 17 through 18 are based on the following reading passage.

Scholars of early Buddhist art agree that Buddha images in human form emerged around the first century A.D. in the regions of Mathura, located in central India, and Gandhara, now part of Pakistan and Afghanistan. Uncertainty exists, however, about whether Mathura or Gandhara has the stronger claim to primacy. Those who believe that anthropomorphic sculptures of the Buddha first appeared in Gandhara point out that earlier Buddhist art was largely aniconic and that *bas relief* was far more common than sculpture. They argue that Greek influence in Gandhara promoted the development of the new style and form of representation of the divine. Other scholars make the case for indigenous development of such representations in Mathura, citing a centuries-long record of iconic art in pre-Buddhist traditions. They don't reject all foreign influence, but they argue that local traditions provided a strong foundation for the development of Buddhist sculpture.

Art historians bolster their arguments by highlighting distinctive features of the sculptures from each region. For example, the artists of Gandhara sculpted their Buddhas in heavy, pleated drapery, similar to that of Greek statues. Wavy lines indicating hair also reflect Greek influence. Mathura Buddhas, on the other hand, are portrayed wearing lighter robes draped in a monastic style, often with part of the shoulder and chest left bare. Elongated earlobes and strong facial features characterize Mathura images of the Buddha, whereas Gandhara images possess more angular features. Sorting out dates and directions of influence has proven difficult, but the totality of evidence suggests that the Buddha image evolved simultaneously in both regions and was shaped by the predominant cultural influences in each region.

Which of the following, if true, would those who believe that anthropomorphic images of Buddha originated in Gandhara be likely to cite as evidence for their viewpoint?

- ○ Pre-Buddhist subcultures in the Gandhara region created representations of their deities in human form.
- ○ Mathuran Buddhas' lightweight robes appear to have been modeled on the real robes of people who lived in a warm climate.
- ○ Gandharan artists were isolated from the larger society and not exposed to influences from outside the region.
- ○ Rulers from the Mathura region had political ties to Greek rulers and frequently exchanged gifts with them.
- ○ The hairstyles worn by Gandharan Buddhas are similar to those depicted on Greek pottery from the same period.

According to the passage, Buddhist art

- ○ first appeared in regions that are now part of India, Pakistan, and Afghanistan
- ○ experienced a period during which human representations of the Buddha were not common
- ○ characteristically portrayed figures with elongated earlobes and strong facial features
- ○ began to appear in the medium of *bas relief* as a result of Greek influence
- ○ was more influenced by foreign artworks than by indigenous artistic traditions

SECTION 4: VERBAL REASONING

Questions 19 through 20 are based on the following reading passage.

In 1887, Eugene Dubois began his search in Sumatra for the "missing link"—the being that would fill the evolutionary gap between ape and man. He discovered a fossilized human-like thighbone and a section of skull. He confirmed that these fossils were of significant age, based on other fossils in the same area. The thighbone's shape indicated that it belonged to a creature that walked upright. Dubois estimated the size of the creature's skull from the skull fragment and concluded that this creature's brain volume was between that of the higher primates and that of current humans. Although the concept of "missing link" has changed dramatically and a recent dating showed Dubois's fossils to be far too recent for humans to have evolved from this "missing link," the value of his discovery and the debate it generated is unquestionable.

Consider each of the choices separately and select all that apply.

The passage supplies information to answer which of the following questions?

☐ What was the approximate age of the fossils found by Dubois?

☐ Does Dubois's find meet current definitions of the "missing link?"

☐ Do the flaws in Dubois's conclusions invalidate his work?

Select a sentence in which the author reaches a conclusion.

NO TEST MATERIAL ON THIS PAGE

SECTION 5: QUANTITATIVE REASONING

Questions 1 through 8 each consist of two quantities, Quantity A and Quantity B. You are to compare the two quantities and choose the appropriate answer. In a question, information concerning one or both of the quantities to be compared is centered above the two columns. A symbol that appears in both columns represents the same thing in Quantity A as it does in Quantity B.

R is a circle with radius 6.

Quantity A	Quantity B
The ratio of the circumference of R to the radius of R	6

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

Quantity A	Quantity B
$\dfrac{.62}{.124}$	$\dfrac{.001}{.0002}$

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

Quantity A	Quantity B
The remainder when 135 is divided by 7	The remainder when 135 is divided by 19

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

a and b are integers.

$$a^2 = b^4$$

Quantity A	Quantity B
a	b

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

$$ab < 0$$
$$bc > 0$$

Quantity A	Quantity B
ac	0

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

$$|x| = 6$$
$$y = x + 4$$

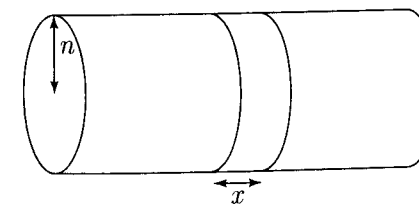| Quantity A	Quantity B
y	10

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

A piece of ribbon is wrapped around a right circular cylinder with radius n. The ribbon, which encircles the cylinder without overlap, has width x and an area equal to the area of the base of the cylinder.

Quantity A	Quantity B
x	n

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

Set A: $\{1, 2, 7, 8, 15, 2, 3, 5, 6, 13\}$

x is the median of the even numbers in Set A.

y is the median of the prime numbers in Set A.

z is the median of the least and greatest numbers in Set A.

Quantity A	Quantity B
The median of $2x$, y, and z	z

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

Oil is pumped from a well at a rate of 500 gallons per hour. How many gallons of oil are pumped from the well in 3 hours and 15 minutes?

	gallons

Click on the answer box, then type in a number. Backspace to erase.

A certain pet store sells only dogs and cats. In March, the store sold twice as many dogs as cats. In April, the store sold twice the number of dogs than it sold in March, and three times the number of cats that it sold in March. If the total number of pets the store sold in March and April combined was 500, how many dogs did the store sell in March?

○ 80

○ 100

○ 120

○ 160

○ 180

11 of 20

In the coordinate plane, rectangle WXYZ has vertices at $(-2, -1)$, $(-2, y)$, $(4, y)$, and $(4, -1)$. If the area of WXYZ is 18, what is the length of its diagonal?

○ $3\sqrt{2}$

○ $3\sqrt{3}$

○ $3\sqrt{5}$

○ $3\sqrt{6}$

○ $3\sqrt{7}$

12 of 20

How many three-digit integers can be created from 5 distinct digits?

○ 10

○ 15

○ 20

○ 30

○ 60

13 of 20

At Megalomania Industries, factory workers were paid $20 per hour in 1990 and $10 per hour in 2000. The CEO of Megalomania Industries was paid $5 million per year in 1990 and $50 million per year in 2000. The percent increase in the pay of Megalomania's CEO from 1990 to 2000 was what percent greater than the percent decrease in the hourly pay of Megalomania's factory workers over the same period?
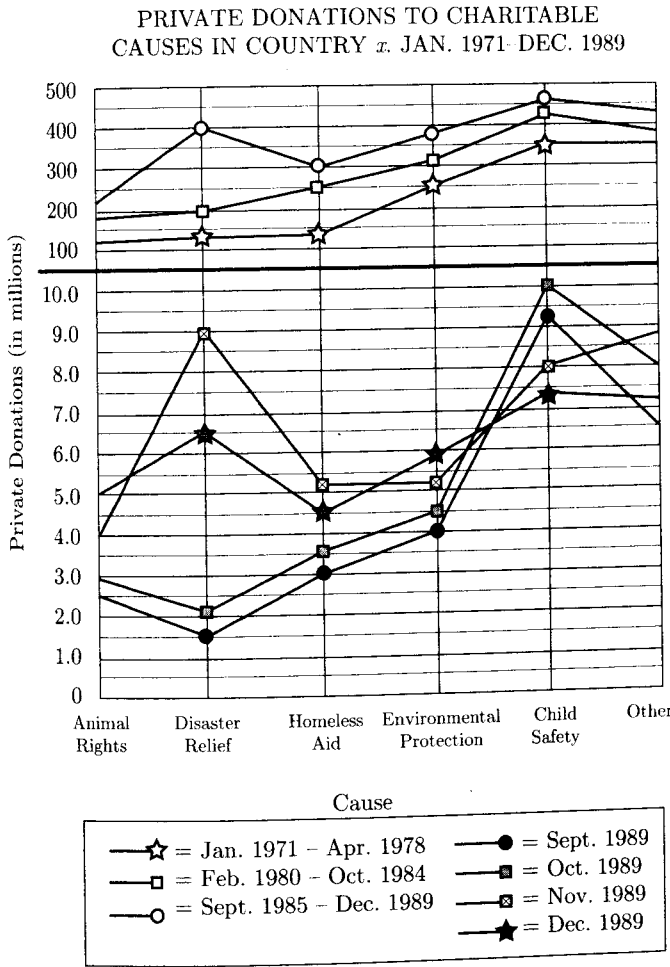
○ 850%

○ 900%

○ 950%

○ 1,700%

○ 1,900%

14 of 20

In the repeating decimal 0.0653906539..., the 34th digit to the right of the decimal point is

○ 9

○ 6

○ 5

○ 3

○ 0

Questions 15 through 17 refer to the following graph.

PRIVATE DONATIONS TO CHARITABLE
CAUSES IN COUNTRY *x*, JAN. 1971- DEC. 1989

Cause

```
—☆— = Jan. 1971 – Apr. 1978      —●— = Sept. 1989
—□— = Feb. 1980 – Oct. 1984      —■— = Oct. 1989
—○— = Sept. 1985 – Dec. 1989     —◘— = Nov. 1989
                                  —★— = Dec. 1989
```

15 of 20

If funds contributed to child safety organizations in September 1989 were distributed evenly to those 38 organizations, approximately how much did each charity receive?

○ $12,000,000

○ $9,400,000

○ $2,500,000

○ $250,000

○ $38,000

16 of 20

From September 1985 to December 1989, what was the approximate ratio of private donations in millions to homeless aid to private donations in millions to animal rights?

○ 20:9

○ 3:2

○ 4:3

○ 9:7

○ 6:5

17 of 20

Which of the following charitable causes received the smallest percent increase in private donations from September 1989 to October 1989?

○ Animal Rights

○ Disaster Relief

○ Homeless Aid

○ Environmental Protection

○ Child Safety
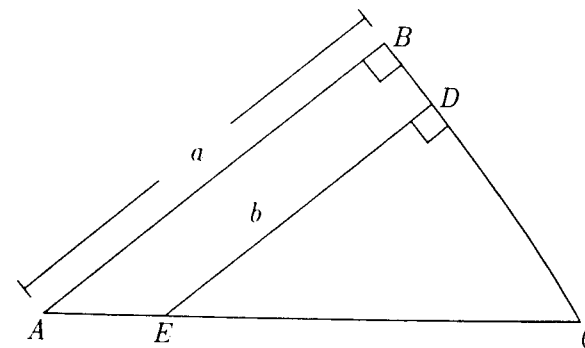
If $3x + 2y = 24$, and $\dfrac{7y}{2x} = 7$, then $y =$

[ ]

*Click on the answer box, then type in a number.
Backspace to erase.*

If the average (arithmetic mean) of 6, 8, 10, and x is between 7 and 11 inclusive, what is the greatest possible value of x?

○   8

○   11

○   20

○   28

○   44

If $AB = BC$, which of the following expresses the area of quadrilateral $ABDE$?

○ $\dfrac{a^2}{2} - \dfrac{b^2}{2}$

○ $\dfrac{a^2}{2} + \dfrac{b^2}{2}$

○ $a^2 - b^2$

○ $\dfrac{a^2}{4} - \dfrac{ab}{2}$

○ $\dfrac{a^2}{4} + \dfrac{ab}{2}$

NO TEST MATERIAL ON THIS PAGE

For questions 1 through 5, select one entry for each blank from the corresponding column of choices. Fill all blanks in the way that best completes the text.

1 of 20

Many fashions that were considered daring in their time have been so widely worn and imitated that the (i)_____ style is no longer seen as (ii)_____ .

Blank (i)	Blank (ii)
proposed	outlandish
original	commonplace
revealing	copied

2 of 20

Western culture has so influenced Middle Eastern music that even the latter's roles of composer and performer, at one time inseparable, have now begun to _____ .

divulge
retreat
retrench
diverge
fuse

3 of 20

Kazan was quickly (i)_____ by many of his contemporaries for his transgression, who saw his testimony as treachery, an act of (ii)_____ which stained how they viewed him both as an artist and as a man. It was only by continually making films that he was able to (iii)_____ his perceived sins and achieve some measure of atonement.

Blank (i)	Blank (ii)	Blank (iii)
rebuked	perfidy	exacerbate
lauded	sophistry	deviate
mitigated	redemption	expiate

4 of 20

Although tranquilizers usually have a _____ effect, this is not always the case, especially when the abuse of these drugs results in a failure to induce the much-desired sleep.

soporific
sedulous
coruscating
debilitating
penetrating

5 of 20

As a rule, (i)_____ interpretations of events are rejected by modern science in its attempts to find secular insights into the matrix of causes and effects in our modern world. Paradoxically, this fact does not (ii)_____ the existence of individual scientists who possess views that may be (iii)_____ with a belief in supernatural causes.

Blank (i)	Blank (ii)	Blank (iii)
falsifiable	countenance	at variance
preternatural	enhance	consonant
teleological	preclude	discrepant

6 of 20

The Johnsons were not known for their (i)_____ : at the very least, none of the family members was fearful of (ii)_____ , of appearing or acting differently from other people.

Blank (i)	Blank (ii)
candor	pettiness
vulgarity	eccentricity
conformity	complaisance

Questions 7 through 10 are based on the following reading passage.

According to most scientists, the universe began approximately 10 to 15 billion years ago and has been expanding ever since. This theory, known as the Big Bang theory, is the fairly direct result of Hubble's law, which states that objects farther away from Earth are receding faster than those closer. This expansion implies a singular point which all matter is expanding from.

Complicating the scientific explanation is that the Big Bang cannot be thought of as an explosion from some identifiable source—rather, space and time were created in the Big Bang. Furthermore, the relationship between distance and speed is not precisely linear. So, if one were to think of galaxies as particles created in a big bang, these galaxies have both a local component of motion, as well as playing a role in the overall expansion of the universe.

A further complication is that galactic distances are so great that galactic motion, even if the galaxies are moving at incredible speeds, is difficult to observe. **Scientists must therefore rely on a "standard candle," an object of known brightness within the galaxy they wish to observe.** Using the inverse square law, scientists can then measure the how far that galaxy is away from our own. For instance, suppose a supernova in galaxy A appears one hundred times as bright as one in galaxy B. By the inverse square law, galaxy B is ten times farther away than galaxy A, assuming, of course, that distance is the only factor affecting brightness.

7 of 20

It can be inferred from the sentence highlighted in the passage that a standard candle is useful to scientists for which of the following reasons?

○ Standard candles do not have their own locus of motion.

○ Standard candles more reliably adhere to the law of inverse squares than do other supernovas.

○ Only standard candles provide a known measure of brightness.

○ Knowledge of an object's brightness of an object allows scientists to measure the speed at which the object is moving toward Earth.

○ Knowledge of an object's brightness allows scientists to accurately measure its distance from Earth.

8 of 20

According to the passage, if two astronomical objects of differing distances from Earth were observed, which of the following would be true of the object closer to Earth?

Select all such statements.

☐ It would not be as bright as the object farther from Earth.

☐ It would be younger than the object farther from Earth.

☐ It would be traveling away from the Earth more slowly than the farther object.

9 of 20

According to the passage, a standard candle may not provide an accurate measure of distance if

○ the galaxy being measured is moving too quickly

○ interstellar dust makes the object measured appear dimmer than it really is

○ if the galaxy being measured has a local component of measurement

○ the particles being measured do not completely accord with a linear motion

○ the galaxies being measured move at different speeds

10 of 20

According to the passage, if two supernovas are observed and one of those supernovas is brighter than the other, scientists can conclude that

○ the brighter supernova is moving closer to our galaxy at a higher speed

○ the precise location of the supernova is measurable

○ the brighter supernova may be closer to our own galaxy

○ the brighter supernova is farther away from Earth by a distance that is roughly inversely proportional to the dim supernova

○ the distance between the supernovas and our own galaxy is inversely proportional

Questions 11 through 12 are based on the following reading passage.

Throughout the twentieth century, it was accepted as fact that cells in our brains, called neurons, do not regenerate. Research by neurologist Elizabeth Gould overturned this core doctrine within the span of a few years. Her experiments on rats showed that even after suffering severe trauma, their brains were able to heal themselves by regenerating neurons. Gould's findings have incited a flood of new research into applications that may take advantage of neurogenesis.

One such study examines the role of reduced neurogenesis among individuals suffering from depression. It is speculated that neurogenesis may contribute to an explanation for the so called "Prozac lag." As an antidepressant, the immediate boost of serotonin caused by Prozac should have had instantaneous mood elevating effects. However, patients suffering from depression only begin to experience mood elevation weeks after beginning treatment. The study speculates that during this period, the brain may be regenerating neurons.

11 of 20

The author mentions the "Prozac lag" primarily in order to

○ raise a possible objection to a newly proposed theory

○ present a situation for which a new theory may serve an explanatory role

○ offer evidence that runs counter to a previously held belief

○ suggest a counterexample that undermines a newly proposed theory

○ provide supporting evidence that a newly discovered phenomenon may have unforeseen effects

12 of 20

In the second paragraph, select the sentence in which the author describes an unexpected observation.

*For questions 13 through 16, select the **two** answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole **and** produce completed sentences that are alike in meaning.*

13 of 20

Plato, an important philosopher, is primarily known because he wrote down Socrates's _____ conversations. It is through Plato's record of these dialogues that Socrates's teachings have survived and continue to enlighten seekers of wisdom.

☐ inspiring

☐ edifying

☐ tedious

☐ grating

☐ rousing

☐ didactic

14 of 20

Even the colossal meal failed to _____ her voracious appetite.

☐ cadge

☐ exacerbate

☐ provoke

☐ satiate

☐ mendicate

☐ allay

15 of 20

Slicks of oil on a rain-soaked street are _____ and beautiful, but the lovely rainbows they produce on the asphalt can seem rather ugly when one reflects upon the road hazards they create and the environmental damage they entail.

☐ anodyne

☐ iridescent

☐ monocoque

☐ pavonine

☐ parietal

☐ saturnine

16 of 20

He had not always been so callous, but with time he became _____ to the violence around him.

☐ adorned

☐ cauterized

☐ sensitized

☐ ostracized

☐ inured

☐ attuned

When the maker of Megapower, a vitamin supplement, modified its formula two years ago, Tasmania, an island off the coast of New Zealand, suffered a decrease in its export earnings. Tasmania's only export, kiwi fruit, constitutes a substantial portion of the world supply of that fruit. Researchers concluded that the old Megapower formula contained natural kiwi extract, but the new formula does not.

Which of the following, if true, gives the strongest support for the researchers' claim?

- ○ Some South American countries have begun to grow kiwi fruit successfully.

- ○ United States chemists have started development of a synthetic kiwi extract.

- ○ The manufacturers of Megapower chose not to renew their contract with the Tasmanian kiwi growers.

- ○ Imports of kiwi fruit have fallen in the country where Megapower is manufactured.

- ○ There was a marked drop in sales of a number of formerly profitable items that used kiwi as an ingredient.

Questions 18 through 20 are based on the following reading passage.

While art historians do not necessarily agree on the date of the birth of modern art, they do agree that mid-nineteenth century French art shows a clear and distinct break from tradition. Pressed to point to a single picture that represents the vanguard of the modern art movement, art historians will often point to Courbet's *The Painter's Studio.*

The peculiar subtitle of Courbet's work, "Real allegory summing up a seven-year period of my life" confirms that Courbet was striving to do something strikingly original with his work. The argument has been made that the painting struck a blow for the independence of the artist, and that since Courbet's work, artists have felt freed from the societal demands placed upon their work. Paintings prior to Courbet's time were most often focused on depicting events from the Bible, history, or literature. With his singular painting, Courbet **promulgated** the idea that an artist is capable of representing only that which he can experience through his senses of sight and touch: the true artist will then be compelled to make his representation as simply and directly as possible.

18 of 20

Which of the following would most effectively replace the word **promulgated** as it is used in the context of the passage?

- ○ displayed

- ○ disseminated

- ○ proclaimed

- ○ concealed

- ○ secreted

19 of 20

Click on the sentence in the passage that best explains the effect of Courbet's work on other artists.

The effect that Courbet had on painting is most analogous to which situation?

- an avant-garde writer who subverts novelistic conventions

- a machinist who tinkers and improves his invention

- a watercolor painter who paints in the same style as his peers

- a scientist who comes up with a unified theory of several discordant scientific ideas

- a seamstress who makes a ball gown using several different types of fabric

Chapter 17
Answers and
Explanations for
Practice Test 1

INTERPRETING YOUR RESULTS

After you check your answers on the following pages, fill out this sheet to interpret your results.

Analytic Writing Sections

To evaluate your performance on the Analytic Writing sections, compare your response to the advice and samples in the Analytic Writing chapter.

Verbal Reasoning

Refer to the explanations to check your answers. Count of number of questions you got correct in each Verbal Reasoning section, and calculate the total number correct. Find the section of the Interpretive Guide (below) that corresponds to your total to get an idea of how your performance compares to that of other test takers.

Test 1	# Correct
Section 4	
Section 6	
Total	

Test 2	# Correct
Section 3	
Section 5	
Total	

Quantitative Reasoning

Refer to the explanations to check your answers. Count of number of questions you got correct in each Quantitative Reasoning section, and calculate the total number correct. Find the section of the Interpretive Guide (below) that corresponds to your total to get an idea of how your performance compares to that of other test takers.

Test 1	# Correct
Section 3	
Section 5	
Total	

Test 2	# Correct
Section 4	
Section 6	
Total	

Interpretive Guide

The table below provides a guide for interpreting your performance based on the number of questions you got correct in each subject.

Subject	Well Above Average	Above Average	Average	Below Average
Verbal Reasoning	51–56	40–50	23–39	1–22
Quantitative Reasoning	48–52	40–47	24–39	1–23

Section 3

1. **A**

   Point C has the same x–coordinate as point D, so $s = 8$. Point C also has the same y-coordinate as point B, so $t = 7$. That means that Quantity A is greater.

2. **A**

   The soda has $4 + 5 + 11 = 20$ total parts. The ice cream has $3 + 2 + 15 = 20$ total parts. You're dealing with the same totals. If you added two parts of soda, then that's $4 \times 2 = 8$ parts sugar and $5 \times 2 = 10$ parts citric acid. If you added three parts ice cream, then that's $3 \times 3 = 9$ parts sugar and $2 \times 3 = 6$ parts salt. There's $8 + 9 = 17$ total parts sugar and $10 + 6 = 16$ total parts citric acid. There's more sugar than citric acid.
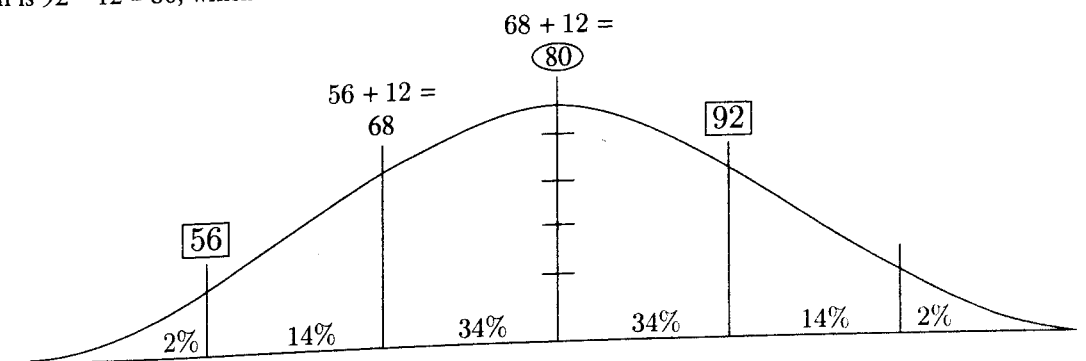
3. **B**

   If you Plug In 5 for x, the total for the 5 days already in the set is 350; after adding the additional 75 degree temperature, the new total is 425, and the new average is $\frac{425}{6}$, which reduces to $70\frac{5}{6}$. Because the additional temperature caused a greater change, there must have been fewer days in the original set. Quantity B is greater.

4. **D**

   Because $\triangle QRS$ is isosceles, side RS must be equal to one of the other sides, and x could measure 4 or 7. Thus, the perimeter could be $4 + 4 + 7 = 15$, or the perimeter could be $4 + 7 + 7 = 18$. You can't tell if the perimeter is greater or less than 17, and, thus, the answer is choice (D). Remember, if it doesn't say "Drawn to scale," you can't assume it is!

5. **B**

   Remember that a normal distribution curve has divisions of 34 percent, 14 percent, and 2 percent on each side of the mean. 80 out of 500 is 16 percent, or 14 percent + 2 percent, and 10 out of 500 is 2 percent. Draw a normal distribution curve and label it. There are three standard deviations between 92 and 56, so $92 - 56 = 36$, and $36 \div 3 = 12$. The mean is $92 - 12 = 80$, which is smaller than Quantity B.

6. **C**

   Plug In numbers for the sides. Let $AD = 4$, so $EG = 8$. Let $l = 3$. The area of $ABCD = 3 \times 4 = 12$, and the area of $EFG = \frac{1}{2}(3 \times 8) = 12$. The two quantities can be equal, so eliminate answer choices (A) and (B). Try changing your numbers, and you will see that the two quantities will always be equal.

7. B

FOIL out the equation given, and you'll get $(3x-4y)(3x+4y) = 9x^2 - 16y^2$, so Quantity A is 2. Quantity B is therefore bigger, and the answer is (B).

8. C

Solve for a by adding 2 to each side to get $8a = 24$. Divide by 8 to find $a = 3$. Plug $a = 3$ into the second equation to find $4(3) - 1 = 12 - 1 = 11$. Alternatively, you could save yourself some time by noticing that $8a - 2$ is $2(4a - 1)$. If $2(4a - 1) = 22$, divide by 2 to get $4a - 1 = 11$.

9. 56

Twenty percent of the sweaters in the store are white, so there are $200 \times \dfrac{20}{100} = 40$ white sweaters. There are $200 - 40 = 160$ sweaters remaining. Of the remaining sweaters, $160 \times \dfrac{40}{100} = 64$ are brown. That means that $160 - 64 = 96$ are blue. There are $96 - 40 = 56$ more blue sweaters than white sweaters.

10. D

Because 4^{12} is a common factor, you can rewrite the numerator as $4^{12}(4 - 1)$. Now look at the whole fraction: $\dfrac{4^{12}(4-1)}{4^{11}}$. You can divide 4^{12} by 4^{11}, leaving you with $4^1(4 - 1)$. Now the calculation should be much easier. $4 \times 3 = 12$, choice (D).

11. D

Refer to the second chart, then the first chart. In 1980, Newsmagazine X accounted for 14.6 percent of newsmagazine subscriptions, and it had 7,000 subscriptions.

12. B

In 1981, Newsmagazine Z accounted for 9,400 out of 57,000 newsmagazine subscriptions. Therefore, Newsmagazine Z accounted for approximately 9,000 out of 57,000, or $\dfrac{1}{6}$, of the nationwide newsmagazine subscriptions.

13. D

In 1970, there were 1,500 subscriptions to Newsmagazine X, which accounted for approximately 25 percent of total nationwide subscriptions. Total nationwide subscriptions in 1970, then, were equal to about 6,000 (25 percent of total nationwide subscriptions = 1,500). Using the same process, total nationwide subscriptions in 1971 were equal to about 9,000 (30 percent of total nationwide subscriptions = 2,600). The percent increase between 1970 and 1971 is $\dfrac{difference}{original}$ or $\dfrac{9{,}000 - 6{,}000}{6{,}000} = \dfrac{3{,}000}{6{,}000} = \dfrac{1}{2}$, or 50 percent.

14. C

In 1973, Newsmagazine X had 3,300 subscriptions, or 20.5 percent of the total number of newsmagazine subscriptions. Set up the calculation to find the total: $3{,}300 = \dfrac{205x}{100}$. Solve it to find that $x = 16{,}000$.

15. C

$a = 27 \times \dfrac{1}{3^2} = 3$, and $x = 6 \times \dfrac{1}{3} = 2$. Find $(12)(3^{-x})(15)(2^{-a}) = (12)(3^{-2})(15)(2^{-3}) = \dfrac{(12)(15)}{(3^2)(2^3)}$. Now, reduce: $\dfrac{(2 \times 2 \times 3)(3 \times 5)}{(3 \times 3)(2 \times 2 \times 2)} = \dfrac{5}{2}$.

16. A, C, and D

This is a combination because who ordered what does not matter; you are only interested in how many different orders it is possible to make. If Sandy brings 1 family member, there are 10 menu items from which 2 are chosen, and the number of combinations is $\dfrac{10!}{2!8!} = \dfrac{10 \times 9}{2 \times 1} = 45$, so choice (A) is correct. If she brings 3 people, the number of combinations is $\dfrac{10!}{3!7!} = \dfrac{10 \times 9 \times 8}{3 \times 2 \times 1} = 120$, and choice (C) is correct. Finally, if all 4 people are there, the number of combinations is $\dfrac{10!}{4!6!} = \dfrac{10 \times 9 \times 8 \times 7}{4 \times 3 \times 2 \times 1} = 210$, and choice (D) is correct.

17. 270

There are two ways to do this one. You could plug in values for all the angles, keeping in mind that those inside the triangle must add up to 180°, the ones along AB must add up to 180, the ones along BD must add up to 180°, and the ones at C must add up to 90°. Then add up the marked angles. Alternatively, using the Rule of 180°, add the two straight lines and the right angle (AB, BD and $\angle ACD$) to get 450°, and then subtract the unmarked portions, which are the three angles in the triangle, or 180°: 450° − 180° = 270°.

18. B

In this problem, you are choosing a red and then a red. Remember that and tells you to multiply the probabilities. The numerator in the first event will be the 3 red marbles, and the numerator in the second event will be 2 because you've already selected 1 red in the first event: $\left(\dfrac{3}{a}\right)\left(\dfrac{2}{b}\right)$. The denominator will be the total, then 1 less than the total. Because 55 has factors of 11 and 5, and there's a 2 to factor out in the top, you know that the denominator must be $11 \times 5 \times 2$ or 11×10. So, the total must be 11. Alternatively, you could plug in the answers starting with choice (C). If the total is 55, then the probability would be $\left(\dfrac{3}{55}\right)\left(\dfrac{2}{54}\right)$, which does not equal $\dfrac{3}{55}$. The denominator is too large, so try choice (B). If the total is 11, then the probability is $\left(\dfrac{3}{11}\right)\left(\dfrac{2}{10}\right)$, which reduces to $\dfrac{3}{55}$.

19. D

Use the Group formula: Total = Group 1 + Group 2 − Both + Neither. In this problem the total is 2,400. The question also states that 1,200 students (half of the total) take calculus, so that is Group 1; one-third of that group (400) take both calculus and English. Because every student takes calculus or English or both, the Neither group is zero. Solve for the number of students who take English by plugging these numbers into the group formula: 2400 = 1200 + Group 2 − 400. The number of students who take English is 1,600, or choice (D).

20. **6**

This is a giant fraction. On the top, you have $15 \times 14 \times 13 \times 12 \times 11 ... \times 2 \times 1$. On the bottom, you have $3 \times 3 \times 3$ and so on. The question is, how many 3's can you have on the bottom that will cancel out with 3's on the top? So, how many 3's do you have on the top? Well, 15 can be expressed as 3×5, 12 can be expressed as 3×4, 9 can be expressed as 3×3, 6 can be expressed as 3×2, and we have 3. In total, there are six 3's in the expression on top, which means we can have as many as six on the bottom, and they will all cancel out. The correct answer is (6).

Section 4

1. **abundant** and **cost-effective**

   The clue for the second blank is "on the earth's surface, where the processing of chemicals is less costly." Underwater recovery, in contrast, would be more expensive. The second blank describes what's not true of the procedure, so use a word that means low-cost. *Cost-effective* is a close match. Use the same clue for the first blank. If the processing of ores from the surface is less costly, those ores must be plentiful. *Abundant* is a good match.

2. **irresponsible, forestall** and **avoidable**

   The keys to the first blank are the clues "given their responsibilities as democratically elected officials" and "neglect to do everything they could." These clues indicate that the first blank should have a negative connotation; a word that means something as simple as bad would eliminate *thoughtful* and *intuitive*, leaving *irresponsible*. Blanks (ii) and (iii) build on the idea set up in the first half of the sentence. The second blank describes the action that would be bad, so use something that means solve. *Sustain* and *cultivate* are the opposites of what's needed for the second blank, leaving *forestall*. The last blank describes the type of problem, and *entirely* suggests it's a solvable problem. *Avoidable* is close, and it helps the whole sentence make sense.

3. **erudite**

   Despite is a trigger word that implies a contrast between the student's actual behavior when presenting her thesis and her mentor's advice. The student resorted to using slang, language that is informal and unscholarly. Therefore, the word in the blank must mean *formal* or *scholarly*. The only word that fits that description is *erudite*, which is the best choice. The other answer choices can be used to describe speech, but none of these words contrast the mentor's advice with the student's use of slang.

4. **augmented, overwhelmed,** and **delicate**

   Start with the second blank. The clue *pungent* tells you this onion did something bad to the delicious stew. *Exaggerated* and *satiated* are positive; *overwhelmed* is the only fit. The trigger *otherwise* tells you to change direction from the third blank's clue of *pungent*. Look for a word that means *subtle* or *soft*. Only *delicate* fits. For the first blank, the clue is that Steve's stinky onion hurt the delicate stew. The trigger *although* tells you to change direction. So, this addition of the sweet potato was good. Only *augmented* fits.

5. **banal, an adept,** and **sublime**

   The first clue is *its focus on such everyday objects as flowers or fruits apparently uninspired*, so the first blank has to mean something such as "uninspired." *Banal*, which means predictable, matches this. For the second blank, the painter must pay *careful attention*, so the second blank must mean "careful" or "talented," which matches *an adept*. Since the painting is *exemplary*, the third blank must be *sublime*.

6. **teratoid** and **bonny**

   The first blank requires a synonym for *hideous*; *teratoid* means monstrously deformed, and so works well. *Limpid* means transparent, and *fatuous* means foolish, so those words don't work. For the second blank, both the trigger phrase "a study in contrasts" and the clue about "fashion magazines" suggest that a word that means beautiful is appropriate. Though it might not sound like it, *bonny* does, in fact, mean beautiful. *Felicitous* means well-expressed, and *decorous* means full of propriety, so although they are both positive words, they aren't as fitting here as the credited response is.

7. **D**

   According to the first sentence, her work can be viewed be viewed three different ways. The rest of the passage describes those ways: as the work of a modern poet, of a woman, and of a Native American. Choice (A) is too vague, and the passage doesn't so much describe her work as how it should be viewed. Choices (B) and (C) are too narrow and don't describe the overall purpose. Choice (E) doesn't match the passage.

8. **B**

   In the second paragraph the author states, "Mr. Wilson's praise gives the impression that Feather's readership is limited to her own culture—an impression which hints that Mr. Wilson is himself only measuring her by one criterion," which best fits choice (B). Choices (A) and (E) contradict the passage and are too broad and extreme. Choice (C) contradicts the passage, and choice (D) is not supported.

9. **E**

   The second sentence of the passage claims, "We could consider her poems as the product of a twentieth-century artist in the tradition of James Joyce, T.S. Eliot, and Wallace Stevens." Thus, the author mentions Joyce, Eliot, and Stevens in order to describe one context—twentieth-century poetry—in which Feather's work can be analyzed. Eliminate choice (A) because the author doesn't compare Feather's political messages to those of these authors. Eliminate choice (B) because the author doesn't use these authors to discuss differences between male and female poets. Eliminate choice (C) because the author doesn't contrast Feather's themes with those of these authors. Although Joyce, Eliot, and Stevens were, like Feather, twentieth-century artists, the passage doesn't say that they shared sensibilities, which eliminates choice (E).

10. **C**

    Only answer choice (C) provides a clue to the meaning of *urbane* as used here: The urbane buyer is contrasted with the "unsuspecting or naïve buyer," and so must mean "not unsuspecting" or "not naïve." Choice (A) tantalizingly dangles the word rural before our eyes, trying to take advantage of that word's well-known association with the word urban. *Urban*, though, means *sophisticated*. Moreover, if answer choice (A) were accepted, the strangely illogical proposition that city-dwellers knew best how to buy animals at market would have to be accepted as well. Answer choice (B), thankfully, presents no such difficulties of interpretation and appears in the definition of the obscure expression itself, not in the comparison between unsuspecting and urbane.

11.

    In the last sentence of the passage, the author says, "let the cat out of the bag." This is the only sentence in which the author uses a seemingly nonsensical expression. The second sentence is tempting, but the author isn't actually using the expression.

12. **propriety** and **decorum**

The clue "was such a bad-mannered child." Time acts as a change-of-direction trigger ("now, as an adult") that indicates the blank should mean something like well-mannered. Only *propriety* and *decorum* mean well-mannered. *Diffidence, reticence,* and *brashness* are all traits that would be considered bad-mannered. *Friendliness* does not necessarily mean well-mannered.

13. **whimsical** and **capricious**

The blank describes how politicians act. The clue is "acting out a deliberate plan." The change-of-direction trigger *however* tells you that they appear not to have a plan. Words that mean unplanned or random should be in the blank. *Whimsical* and *capricious* both fit this meaning. *Conventional* and *conformist* have the opposite meaning. The other two words are unrelated to the blank.

14. **irksome** and **onerous**

The trigger "even more" tells you to stay in the same direction as the clue. "Forced to take an alternate road," "two-hour detour," and "arduous trip" tell you that the journey was difficult. Put a word that means hard or tiring in the blank. Only *irksome* and *onerous* fit this meaning. *Facile* and *glib* describe something easy, and *implacable* and *immutable* describe something that doesn't change.

15. **adventurous** and **doughty**

The trigger *especially* tells you to stay in the same direction as the clue "willingness to reject prevailing feminine roles and travel to foreign lands alone." Thus, she has a bold spirit. Only *adventurous* and *doughty* mean bold. Although she is traveling alone, there is nothing to support that she is lonely, as *forlorn* and *desolate* suggest. *Magnanimous* and *bellicose* do not fit.

16. **A**

The argument concludes that the substitution of microfiber clothes for those made from natural fabrics is not financially sound. The premise is that microfiber clothes last as long as natural fabric clothes but are three times as expensive to produce. The argument assumes that there are no other factors that need to be considered to evaluate the cost effectiveness of switching. Choice (A) points out another factor that would affect the overall costs and so weakens the argument. Choice (B) helps to explain why the microfiber synthetic shirt is more expensive to produce than a natural fiber shirt, but it does not weaken the argument. In choice (C), comparing natural fiber shirts and other fiber garments is not relevant. Choice (D) strengthens the argument. Choice (E), by pointing out additional costs associated with microfibers, also strengthens the argument.

17. **E**

The first paragraph presents the Gandhara-first view "...Greek influence in Gandhara promoted the development of the new style and form of representation of the divine." The second paragraph provides evidence Gandharan Buddhas shared certain features with Greek art. Choice (E) provides additional information about those similarities and is the best choice. Choices (A) and (C) undermine the idea that Gandharan artists were responding to outside influences. Choice (B) is irrelevant, and choice (D) provides evidence for outside influences in Mathura.

18. **B**

The first sentence says that "images in human form emerged around the first century A.D.," and the middle of the first paragraph states that "earlier Buddhist art was largely aniconic." You can conclude from these statements that the earliest Buddhist art didn't usually depict the Buddha in human form. Eliminate choice (A); although human representations first appeared in these regions, the passage doesn't say that the first Buddhist art appeared in the same places. The passage doesn't support choices (C), (D), and (E).

19. **B and C**

For choice (A), the passage only says that the age of these fossils was "far too recent for humans to have evolved" from them. This does not given an age for the fossils. The last sentence says that "the concept of 'missing link' has changed dramatically," which answers the question in choice (B). The last sentence also answers the question in choice (C) because it says, "the value of his discovery and the debate it generated is unquestionable."

20. **B and C**

For choice (A) we are told that the fossil is of "significant" age; no actual age is given for the fossil. Cross off (A). While the definition has changed, and this one couldn't have yielded today's humans, the different direction trigger words mean that this is a "missing link." The last sentence of the passage says that the discovery is "invaluable" so whatever "invalidate" means, the discovery still has value. The answers are (B) and (C).

Section 5

1. **A**

If *R* has radius 6, then the circumference of *R* is $2\pi(6)$, or 12π. The ratio of 12π: 6 or $\frac{12\pi}{6}$ reduces to 2π, and because π is a little more than 3, 2π is a little more than 6.

2. **C**

Move the decimal point to the right in the numerator and denominator until each is an integer. Quantity A = $\frac{6.2}{1.24} = \frac{62}{12.4} = \frac{620}{124} = 5$. Quantity B = $\frac{.01}{.002} = \frac{.1}{.02} = \frac{1}{.2} = \frac{10}{2} = 5$. The quantities are equal.

3. **C**

$135 \div 7 = 19$, remainder 2. $135 \div 19 = 7$, remainder 2. Quantity A and Quantity B both equal 2.

4. **D**

Plug In. Let *a* = 8 and *b* = 4. Quantity A can be greater than Quantity B, so eliminate answer choices (B) and (C). Now let *a* = *b* = 1. Quantity A can be equal to Quantity B, so eliminate answer choice (A).

5. **B**

Plug In numbers for *a*, *b*, and *c*. If *a* = –2, *b* = 3, and *c* = 4, then *ac* = –8. Quantity B is greater; eliminate choices (A) and (C). If *a* = 2, *b* = –3, and *c* = –4, then *ac* is still negative. Quickly consider different numbers, but realize that Quantity A will always be negative.

6. **D**

If $|x| = 6$, then $x = 6$, or $x = -6$. If $x = 6$, then $y = 6 + 4 = 10$. The quantities are equal, so you can eliminate choices (A) and (B). If $x = -6$, then $y = -6 + 4 = -2$, and Quantity B is greater. Eliminate choice (C), and select choice (D).

7. **B**

Plug In for the radius, n, and solve for x. Let's make $n = 3$: the area of the base of the cylinder is now 9π, and the circumference of the base is 6π. The ribbon itself is a rectangle, and we now know both its area, which is the same as the area of the base, and its length, which is the same as the circumference of the base. Now we can solve for x, which is the other side of the rectangle: $6\pi x = 9\pi$, so $x = \dfrac{9\pi}{6\pi}$, or $\dfrac{3}{2}$. Our value for n is greater than our value for x, so Quantity B is greater.

8. **C**

Remember that median is the number that ends up in the middle of the list when you rewrite the list in numerical order. Find x: The even numbers are 2, 2, 6, 8. Because 2 and 6 are in the middle, find their mean: $\dfrac{2+6}{2} = 4$. So, $x = 4$. Find y: the prime numbers are 2, 2, 3, 5, 7, 13. Remember, 1 is not prime. Because 3 and 5 are in the middle, find their mean: $\dfrac{3+5}{2} = 4$. So, $y = 4$. Find z: the least is 1, the greatest is 15. The median of 1 and 15 is $\dfrac{1+15}{2} = 8$. So, $z = 8$. For Quantity A, find the median of 2(4), 4, and 8: so, the median of 4, 8, 8, is 8. Quantity B is also 8.
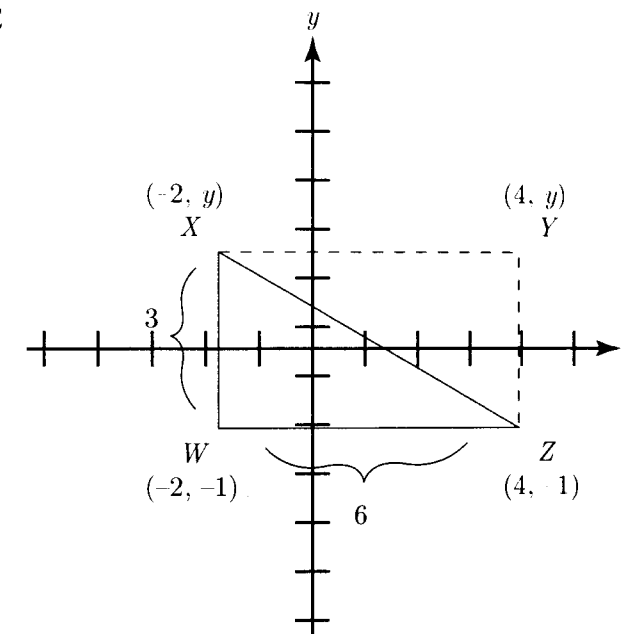
9. **1,625**

Set up a proportion: $\dfrac{1 \text{ hour}}{500 \text{ gallons}} = \dfrac{3.25 \text{ hours}}{x \text{ gallons}}$. Cross multiply to find that $x = 500 \times 3.25 = 1,625$ gallons.

10. **B**

Plug In the answers, starting with the middle choice. If 120 dogs were sold in March, then 60 cats were sold that month. In April, 240 dogs were sold, along with 180 cats. The total number of dogs and cats sold during those two months is 600, which is too large, so eliminate choices (C), (D), and (E). Try choice (B). If there were 100 dogs sold in March, then 50 cats were sold; in April, 200 dogs were sold along with 150 cats. The correct answer is (B) because $100 + 50 + 200 + 150 = 500$.

11. **C**

Notice that the length of WZ must be $4 - (-2) = 6$. The area is $l \times w$. $18 = l \times 3$, and the length is 6. Now you have a right triangle with legs of 3 and 6. Use the Pythagorean theorem: $3^2 + 6^2 = c^2$, or $9 + 36 = c^2$. So, $c = \sqrt{45} = \sqrt{9 \times 5} = 3\sqrt{5}$

12. **E**

Order matters, so this is a permutation problem. You may use the formula: $\dfrac{5!}{(5-3)!} = \dfrac{5!}{2!} = \dfrac{5!}{2} = \dfrac{5 \times 4 \times 3 \times 2 \times 1}{2} = 60$. Alternatively, you may use the "make slots" method to get $5 \times 4 \times 3 = 60$.

13. **D**

The percent increase in the CEO's pay was $\dfrac{\$50 - \$5}{5} \times 100\% = 900$ percent. The percent decrease in the factory workers' pay was $\dfrac{\$20 - \$10}{20} \times 100\% = 50$ percent. To find what percent greater 900 percent is than 50 percent, do the following: $\dfrac{900\% - 50\%}{50\%} \times 100\% = 1,700$ percent, or choice (D).

14. **D**

This is a pattern problem. The pattern has five digits: 06539. Divide 34 by 5, which gives you a remainder of 4. So the 34th digit will be the fourth in the pattern, which is 3.

15. **D**

Divide the $9.4 million in private donations received by child safety organizations in September 1989 by the 38 organizations operating at the time. The amount is approximately $250,000.

16. **C**

From the line graph, you see that homeless aid groups took in about $300 million in private donations, and animal rights groups about $225 million. The ratio of $300 million to $225 million is 4 to 3.

17. **E**

In September 1989, \$9.4 million was privately donated to child safety, and in October 1989, \$9.9 million was privately donated. Percent change is $\dfrac{change}{original} \times 100$. The change is equal to $9.9 - 9.4 = 0.5$ (the difference between private donations in September 1989 and October 1989). The original is equal to 9.4 (the amount of private donations in September 1989). The percent change is $\dfrac{.5}{9.4} \times 100$, or approximately 5 percent. This is lower than the percent change in any of the other categories.

18. $\dfrac{48}{7}$

First, solve for x using the equation $\dfrac{7y}{2x} = 7$. Cross-multiply to find that $7y = 14x$. Dividing both sides by 14 yields $\dfrac{1}{2}y = x$. Substitute this expression into the first equation to get $3(\dfrac{1}{2}y) + 2y = 24$. Combine the like terms to get $\dfrac{7}{2}y = 24$, multiply both sides by $\dfrac{2}{7}$ to find $y = \dfrac{48}{7}$.

19. **C**

Because the question asks you to find the greatest value of x, make the average the largest it can be; in this case, make it 11. If you multiply the number of things (4) and the average (11), the total will be 44. Notice that choice (E) is 44, but it's a partial answer. To find x, solve $6 + 8 + 10 + x = 44$; $x = 20$, or choice (C).

20. **A**

To find the area of quadrilateral $ABDE$, find the area of right $\triangle ABC$ and subtract the area of right $\triangle EDC$. The base and height of $\triangle ABC$ are both a, so the area equals $\dfrac{1}{2} \times a \times a$, or $\dfrac{a^2}{2}$. The base and height of $\triangle EDC$ are both b, so the area equals $\dfrac{1}{2} \times b \times b$, or $\dfrac{b^2}{2}$. Therefore, the area of quadrilateral $ABDE$ is $\dfrac{a^2}{2} - \dfrac{b^2}{2}$.

SECTION 6

1. **original** and **outlandish**

Try working with the second blank first. The clues are that the fashions were "considered daring" and then "imitated." Starting with the second blank, the sentence suggests that the fashions have changed from what they once were—in other words, daring. *Outlandish* is a good synonym for daring and it makes sense that, in the first blank, the fashions were *original* and then lost their impact because of excess imitation.

2. **diverge**

Take note of the time trigger "...at one time inseparable...now", which indicates that the combined roles in Middle Eastern music are now not inseparable. You need a word that means divide or separate. *Divulge* starts with the proper root, but its meaning is way off. Meanwhile, neither *retreat* nor *retrench* means divide, while *fuse* is the opposite of what you want. *Diverge* is the best answer.

3. **rebuked, perfidy, and expiate**

Start with the second blank, which must mean something close to *an act of treachery*. *Perfidy* means this. Since his contemporaries believed Kazan had committed treachery, they would have "harshly criticized" him, so the first blank means rebuked. For the last blank, he was able to achieve *atonement*, which is what *expiate* means.

4. **soporific**

The sentence requires you to figure out the effect that "tranquilizers usually have," and this is provided by the clue in the later part of the sentence, when we read that the "abuse of these drugs results in a failure to induce the much-desired sleep." You can infer that the usual effect of tranquilizers is to produce sleep. *Soporific*, which means sleep-inducing, is the correct answer choice. While *sedulous* might remind you of "sedative," it actually means hard-working.

5. **preternatural, preclude, and consonant**

The clue for the first blank is "are rejected by modern science in its attempts to find secular insights." Otherworldly interpretations contrast the secular, and the best choice for the first blank is *preternatural*. There would only be a paradox if scientists could hold non-secular beliefs. Therefore, a good word for the second blank is *prevent*, and a good phrase for the last blank would be *in agreement*. *Preclude* is synonymous with prevent, and *consonant* is synonymous with in agreement, making these the best answer choices.

6. **conformity** and **eccentricity**

Try working with the second blank first. The clue is "none of the family members were fearful...of appearing or acting differently from other people." Therefore, find a word for the second blank that means uniqueness. *Eccentricity* fits the bill. Considering the clue, "The Johnson's were not known for their," the two blanks must be opposites. Eliminate *candor* and *vulgarity* based on the clue and the word choice for the second blank, and choose *conformity*.

7. **E**

In the last paragraph, the author discusses the difficulties inherent in measuring intergalactic distances. He notes that scientists use a standard candle in combination with the inverse square law to measure those distances.

8. **C**

The passage states in the third paragraph that brighter objects are closer than dim objects, so eliminate choice (A). The passage never specifies what scientists know about the age of astronomical objects, so eliminate choice (B). The first paragraph says that, according to Hubble's law, *objects farther away from Earth are receding faster than those closer*. This means that the farther object will travel faster, so choice (C) is correct.

9. **B**

According to the last line in the paragraph, "By the inverse square law, galaxy B is ten times farther away than galaxy A, assuming, of course, that distance is the only factor affecting brightness." Therefore, if interstellar dust affects the brightness of an object, the brightness of the object is affected, and the distance scientists measure may be inaccurate.

10. **C**

According to the passage, "By the inverse square law, galaxy B is ten times farther away than galaxy A, assuming, of course, that distance is the only factor affecting brightness." Therefore, assuming that all other factors affecting brightness can be known, we can conclude that the brighter of the supernovas will be closer to Earth.

11. **B**

"Prozac lag" is a phenomenon for which there is currently no explanation, but neurogenesis may offer a solution. Answer (A) contradicts this. The passage offers "prozac lag" as supporting evidence of a new theory, not disproving an old one, as choice (C) suggests, or disproving a new one, as choice (D) states. Answer (E) goes too far by discussing "unforeseen effects." Choice (B) is the best option.

12. **However, patients suffering from depression only begin to experience mood elevation weeks after beginning treatment.**

The second paragraph has five sentences, so this question has five answer choices. For an "unexpected observation," a good place to start would be to check the trigger words. The fourth sentence starts with the word "however." While the effects should occur immediately, these don't occur until weeks after starting treatment. The answer is the fourth sentence.

13. **edifying** and **didactic**

The blank describes Socrates's conversations. The clue is "Socrates's teachings have survived and continue to enlighten seekers of wisdom," so the blank must mean instructional. *Edifying* and *didactic* are the closest in meaning. *Tedious, grating, inspiring* and *rousing* could all be used to describe Socrates's conversations, but they do not match the clue.

14. **satiate** and **allay**

You would expect "the colossal meal" to fill someone up, but the sentence says that "failed to…her voracious appetite." Thus, she was not full, and the meal failed to satisfy. *Satiate* and *allay* are the best match. *Cadge* and *mendicate* mean the meal begged her hunger. *Exacerbate* and *provoke* go in the wrong direction.

15. **iridescent** and **pavonine**

The clue for this sentence is "the lovely rainbows they produce," which suggests that the blank should be filled by a word meaning colorful. Both *iridescent* and *pavonine* mean exactly that. Even if you don't agree that the blank necessarily refers to rainbows of color, the missing word does have to agree with *beautiful* due to the trigger and, and none of the other four options does: *anodyne* means eliminating physical pain, *monocoque* means constructed in one piece, *parietal* mean college-related, and *saturnine* means gloomy.

16. **B** and **E**

The clue for this sentence is *callous*, so the blank must mean "used to," or "didn't notice." Choices (B), *cauterized*, and (E), *inured*, mean this. (F) is incorrect because he didn't notice the violence more, but rather noticed it less.

17. **D**

The conclusion of the argument is the old formula for Megapower contained natural kiwi extract, while the new formula does not. The evidence is that Tasmania suffered a decrease in its kiwi exports. The assumption is that Megapower is not getting kiwi fruit from another country. Choice (D) strengthens the argument by pointing out that kiwi imports have fallen in the country that produces Megapower, which would reinforce that assumption that the manufacture is not getting kiwis from another country. Choice (A) would weaken the argument by providing a potential alternate source for kiwi fruit. Choice (C) weakens the argument by providing evidence that the manufacturer of Megapower could be getting kiwi fruit from another source. Choices (B) and Choice (E) are not relevant to the conclusion.

18. **C**

While the word *promulgate* can take on the meanings given in answer choices (A), (B), or (C), within the context of the sentence it is clear that Courbet is taking a stand on what he believes art should be. Therefore, answer choice (C) is closest to the correct meaning.

19. **"The argument has been made that the painting struck a…"**

While the rest of the passage enumerates Courbet's ideas on painting, only this sentence points to the effect that Courbet's work may have had on other artists when it states that "since Courbet's work artists have felt freed from the societal demands placed on their work."

20. **A**

According to the passage, Courbet broke with convention by "striving to do something strikingly original." Only answer choice (A) provides that sense of defying a convention to do something original.

Chapter 18
Practice Test 2

SECTION 1: ISSUE TOPIC

Directions:

You will be given a brief quotation that states or implies an issue of general interest and specific instructions on how to respond to that issue. You will have 30 minutes to plan and compose a response in which you develop a position on the issue according to the specific instructions. A response to any other issue will receive a score of zero.

"Studying foodways—what foods people eat and how they produce, acquire, prepare, and consume them—is the best way to gain deep understanding of a culture."

Write an essay in which you take a position on the statement above. In developing and supporting your position, you should consider ways in which the statement might or might not hold true.

SECTION 2: ARGUMENT TOPIC

Directions:

You will be given a short passage that presents an argument, or an argument to be completed, and specific instructions on how to respond to that passage. You will have 30 minutes to plan and compose a response in which you analyze the passage according to the specific instructions. A response to any other argument will receive a score of zero.

Note that you are NOT being asked to present your own views on the subject. Make sure that you respond to the specific instructions and support your analysis with relevant reasons and/or examples.

Fossil evidence indicates that the blompus—an extremely large, carnivorous land mammal—inhabited the continent of Pentagoria for tens of thousands of years until its sudden decline and ultimate extinction about twelve thousand years ago. Scientists have determined that the extinction coincided with a period of significant climate change and with the arrival of the first humans. Some scholars theorize that the climate change so altered the distribution of plants and animals in the environment that the food chain upon which the blompus depended was irretrievably disrupted. Others contend that predation by humans is the more plausible explanation for the rapid population decline.

Write a response in which you discuss specific evidence that could be used to decide between the proposed explanations above.

For questions 1 through 6, select one entry for each blank from the corresponding column of choices. Fill all blanks in the way that best completes the text.

1 of 20

The (i)_____ with which a statement is conveyed is frequently more important to the listener in determining the intended meaning than the actual words (ii)_____ . For example, a compliment, when delivered sarcastically, will be perceived by the receiver as fairly insulting.

Blank (i)	Blank (ii)
inflection	implied
pitch	repudiated
accuracy	utilized

2 of 20

Though a film studio produces works that are (i)_____ and artistic, its priorities often dictate that creativity be (ii)_____ to a secondary position since the creative process can (iii)_____ the organization and hierarchy necessary to running a large company.

Blank (i)	Blank (ii)	Blank (iii)
expressive	compared	respond to
tedious	uplifted	conflict with
tiresome	relegated	coexist with

3 of 20

Science and religion each have core tenets that are considered _____ ; however, because some scientific tenets are in conflict with some religious ones, these tenets cannot all be correct.

historic
axiomatic
disputable
ubiquitous
empirical

4 of 20

Although most medical, preventative ointments commonly in use would have (i)_____ an infection, the particular one Helen applied to her sores actually, much to her dismay, (ii)_____ her (iii)_____ .

Blank (i)	Blank (ii)	Blank (iii)
surrendered to	contributed to	medicine
exacerbated	detracted from	salve
staved off	disbursed with	affliction

5 of 20

A single (i)_____ remark can easily ruin the career of a politician, so most are quickly trained to avoid such offhand remarks and instead stick to prepared talking points. This training can result in a lack of (ii)_____ , however, and elicit in merely (iii)_____ , lukewarm responses from crowds.

Blank (i)	Blank (ii)	Blank (iii)
elated	spontaneity	ardent
glib	equanimity	tepid
pedantic	rigidity	morose

6 of 20

Oscar Wilde's *The Importance of Being Earnest* satirizes the _____ nature of upper crust British society: its characters take trivial concerns seriously while glibly dismissing important ones.

maladaptive
insincere
unusual
insignificant
shallow

Questions 7 through 8 are based on the following reading passage.

In 1798, economist Thomas Robert Malthus stated in his "Essay on the Principle of Population" that "population increases in a geometric ratio, while the means of subsistence increases in an arithmetic ratio." However, Malthus's dire prediction of a **precipitous** decline in the world's population has not come to pass. The miscalculations in what has come to be known as the Malthus Doctrine are partly due to Malthus's inability to foresee the innovations that allowed vast increases in worldwide wheat production.

In the late nineteenth century, the invention of the tractor staved off a Malthusian disaster. While the first tractors were not particularly powerful, the replacement of animals by machinery meant that land that had been devoted to hay and oats could now be reclaimed for growth of crops for human consumption. Nevertheless, the Malthusian limit might still have been reached if crop yield had not been increased.

A natural way to increase crop yield is to supply the soil with additional nitrogen. In 1909, chemist Fritz Haber succeeded in combining nitrogen and hydrogen to make ammonia, the white powder version of which, when added to the soil, improves wheat production. Haber nitrogen, however, was not widely used until later in the twentieth century, largely due to farmers' resistance to spreading an unnatural substance on their crops. Haber's invention had a further drawback: If applied in incorrect quantities, the wheat crop would grow taller and thicker, eventually toppling over and rotting.

Interestingly, in the late twentieth century the discovery of genetic engineering, which provides a means of increasing rice and maize production, met with equal resistance, this time from the environmental movement. Even without direct genetic engineering, it is likely that science will discover new methods to improve agricultural production.

7 of 20

According to the passage, which is of the following is true about Haber nitrogen?

○ Haber nitrogen is more effective at increasing the yield of wheat crops than that of maize or oat crops.

○ Undesired effects can result from the application of surplus quantities of Haber nitrogen.

○ Haber nitrogen was the first non-naturally occurring substance to be applied to crops as fertilizer.

○ Haber nitrogen may not be effective if applied at an improper time in wheat's growth cycle.

○ Farmers were quick to adopt Haber nitrogen because it made their crops grow taller and thicker.

8 of 20

The passage implies all of the following EXCEPT

○ world food production has kept pace with world population growth

○ technological innovation is one factor that allowed for an increase in crop production

○ complex genetic structure can hinder the efficacy of scientifically induced genetic mutation

○ the Malthusian limit might well have been reached if new methods to increase crop production had not been found

○ a Malthusian disaster would have been ensured if it were not for the invention of genetic engineering

9 of 20

Which of the following, if it were to happen, would best accord with Malthus's contention as it is stated in the first paragraph?

○ By 2040 the world's population increases marginally, and food production keeps pace with demand.

○ By 2040 the world's population decreases marginally, and food production outstrips demand.

○ By 2040 the world's population remains unchanged, and food production declines slightly.

○ By 2040 the world's population has significantly increased, and food production has increased slightly.

○ By 2040 the world's population has significantly decreased, and food production has decreased slightly.

10 of 20

Replacing the word ▓▓▓▓▓ with which one of the following, would least affect the overall meaning of the sentence?

○ anticipated

○ deliberate

○ gradual

○ risky

○ sharp

Questions 11 through 12 are based on the following reading passage.

The dearth of natural resources on the Australian continent is a problem with which government officials there have long struggled. As long distance travel has become less of an obstacle, the tourism industry has become ever more important to the national economy. Tourism represents more than 10 percent of national export earnings annually, and in less developed regions such as the Western Territory, the percentage is much higher.

Unfortunately, this otherwise rosy prospect has one significant cloud on the horizon. In recent years, there has been a move towards returning some of the land to the Aboriginal people. ▓▓▓▓▓▓▓▓▓▓▓

▓▓▓▓▓ attempt to maintain their traditional ways of ▓▓▓ desire that the government has striven to ▓▓▓▓

One of the central beliefs of the Aboriginal religion is that certain natural formations have spiritual significance and must be treated accordingly. Strict guidelines determine who may visit these sites and at what times. Unfortunately, many of these sites are the very natural wonders tourists flock to see. If non-Aboriginal people are forbidden to visit these natural wonders, many may choose not to vacation in a region that sorely needs the income generated by tourism.

The Australian government has dealt with this dilemma thus far by trying to support both sides. The Aboriginal council is still trying to put an end to such use of certain sites, however, and it remains to be seen whether philanthropic or economic desires will ultimately triumph.

11 of 12

In the context of the passage, which of the following most closely matches the meaning of the phrase "otherwise rosy prospect has one significant cloud on the horizon"?

○ A colorful sunset is marred by a dark storm cloud.

○ A generally promising future has a potential problem.

○ The view is beautiful but partially blocked.

○ The future of the Aboriginal people is doubtful.

○ Although the situation looks good, in reality it is hopeless.

12 of 12

Consider each of the choices separately and select all that apply.

According to the passage, which of the following is a cause of the current dispute between the Aborigines and the Australian government?

☐ economic hardships in certain regions of the country

☐ the influx of European value systems

☐ limited natural resources in most of Australia

*For questions 13 through 14, select the **two** answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole **and** produce completed sentences that are alike in meaning.*

13 of 20

George was a mercurial character; one moment he was optimistic about his prospects, and the next he was _____ .

☐ immoral

☐ hopeful

☐ witty

☐ morose

☐ dour

☐ buoyant

14 of 20

Growing up in a wealthy suburb, she felt quite the _____ as she began her first job as a llama caretaker on a rural farm.

☐ tyro

☐ concierge

☐ agronomist

☐ cultivator

☐ neophyte

☐ curator

15 of 20

William Shakespeare's *Macbeth* was based upon a highly _____ version of events that the playwright wrought from Raphael Holinshed's *Chronicles of England, Scotland, and Ireland*; King Duncan's death at the hand of Macbeth comprises the play's only historical truth.

☐ anachronistic

☐ effusive

☐ embellished

☐ prosaic

☐ serpentine

☐ colored

16 of 20

While comic book artists such as Neal Adams demonstrated a more thorough mastery of human anatomy than did the generation that preceded them, some readers wondered whether the superheroes they drew were really supposed to be so _____ that every detail of their musculatures would be visible through their clothing.

☐ thewy

☐ sinewy

☐ superfluous

☐ pneumatic

☐ flocculent

☐ atrophied

Questions 17 through 18 are based on the following reading passage.

One of the most curious structures in cellular biology is the telomere, a length of repeated bases located at the end of every chromosome that, unlike the rest of the DNA strand, carries no useful genetic information. While the telomere seems on the surface to be nothing more than a useless afterthought of DNA, a closer look proves that it is not only important, but also crucial to the functioning of any organism. Indeed, without this mundane structure, every cell division would be a step into senescence, and the onset of old age would begin at birth.

Scientists have found that during cell division not every base of the DNA strand can be replicated, and many, especially those near the end, are lost. If, instead of telomeres, our chromosomes stored valuable genetic information at the end of the DNA strand, then cell division would cause our cells to lose the ability to code for certain information. In fact, many ailments associated with normal old age begin only after the telomere buffer has been exhausted through years of cell division.

17 of 20

Consider each of the choices separately and select all that apply.

Which of the following can reasonably be inferred based on the passage?

☐ The length of the telomere buffer generally shortens with time.

☐ Scientists once believed that telomeres served no useful purpose.

☐ If DNA degradation were absent, then telomeres would be less important to human health.

18 of 20

The passage suggests that if telomere buffers did not exist

○ problems associated with aging would begin earlier in life

○ people would age so rapidly that almost no one would live past childhood

○ cellular senescence would probably be prevented by DNA bases

○ chromosomes would lose the ability to store genetic codes

○ DNA strands would contain only useful genetic information

Questions 19 through 20 are based on the following reading passage.

Music education in America emerged in the early eighteenth century out of a desire to ensure that church goers could sing the weekly hymns in tune. In 1721, John Tufts, a minister, penned the first textbook for musical education entitled *An Introduction to the Singing of Psalm Tunes.* Tufts's pedagogical technique relied primarily on rote learning, omitting the reading of music until a student's singing abilities had improved.

In the same year that Tufts's publication emerged, Reverend Thomas Walter published *The Ground Rules of Music Explained,* which, while also focusing on preparing students to sing religious music, took a note-based approach by teaching students the rudiments of note reading from the onset. The "note versus rote" controversy in music education continued well into the mid-nineteenth century. With no curriculum to guide them, singing school teachers focused on either the rote or note method with little consistency.

19 of 20

The author discusses Tufts's pedagogical technique in order to

○ suggest that rote learning is superior to note learning

○ present a contrast with Walter's educational technique

○ argue that rote learning improves a student's singing ability

○ show the origin of Walter's educational techniques

○ show that rote learning was inconsistently practiced

20 of 20

Select the sentence in the passage that best describes the endurance of the tension between pedagogical techniques.

Questions 1 through 8 each consist of two quantities, Quantity A and Quantity B. You are to compare the two quantities and choose the appropriate answer. In a question, information concerning one or both of the quantities to be compared is centered above the two columns. A symbol that appears in both columns represents the same thing in Quantity A as it does in Quantity B.

1 of 20

Quantity A	Quantity B
0.15	$\frac{3}{20}$

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

2 of 20

5 is r percent of 25

s is 25 percent of 60

Quantity A	Quantity B
r	s

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

3 of 20

g and h are positive integers such that the value of g is twice the value of h.

Quantity A	Quantity B
The ratio of g to 1	The ratio of 1 to h

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

4 of 20

Quantity A	Quantity B
The average (arithmetic mean) of 67, 78, x, and 101	The average (arithmetic mean) of 66, 79, x, and 102

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

5 of 20

In each of the years 1989 and 1990, the total weight of recycled newspapers in a certain country increased by .79 million tons over the previous year.

Quantity A	Quantity B
Percent increase in the weight of recycled newspapers in 1989 over 1988	Percent increase in the weight of recycled newspapers in 1990 over 1989

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

6 of 20

Quantity A	Quantity B
The total weight of m peanuts at a weight of $n + 3$ mg each	The total weight of n almonds at a weight of $m + 3$ mg each

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

7 of 20

Quantity A	Quantity B
$5^{27}(575)$	$5^{28}(115)$

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

8 of 20

Alejandro has a six-sided die with faces numbered 1 through 6. He rolls the die twice.

Quantity A	Quantity B
The probability that both rolls are even	The probability that neither roll is a multiple of 3

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

9 of 20

If $4(r - s) = -2$, then what is r, in terms of s ?

○ $\frac{-s}{2}$

○ $s - \frac{1}{2}$

○ $s - \frac{3}{2}$

○ $s + 2$

○ $2s$

10 of 20

At Tenderloin Pharmaceuticals, 25 percent of the employees take the subway to work. Among those who ride the subway, 42 percent transfer from one subway line to another during their commutes, and the rest do not transfer. What percent of all employees transfer lines?

[   ] percent

Click on the answer box, then type in a number. Backspace to erase.

11 of 20

To make bread dough, a baker mixes flour, eggs, yeast, and salt by weight in the ratio of 11 : 9 : 3 : 2, respectively. How many pounds of yeast are there in 20 pounds of the mixture?

○ $1\frac{3}{5}$
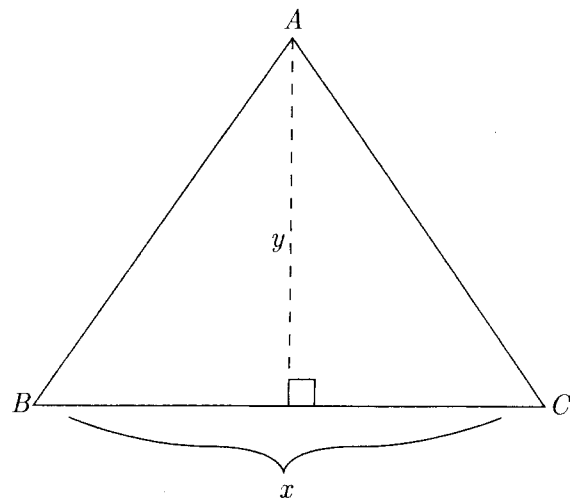
○ $1\frac{4}{5}$

○ 2

○ $2\frac{2}{5}$

○ $8\frac{4}{5}$

12 of 20

$(\sqrt{5} - \sqrt{3})^2 =$

- ○ $2 - 2\sqrt{15}$
- ○ $2 - \sqrt{15}$
- ○ $8 - 2\sqrt{15}$
- ○ 2
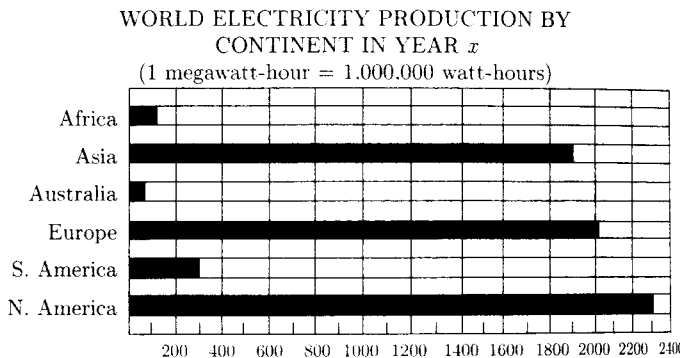- ○ $8 - 2\sqrt{5}$

13 of 20

$\triangle ABC$ has an area of 108 cm². If x and y are both integers, which of the following could be the value of x ?
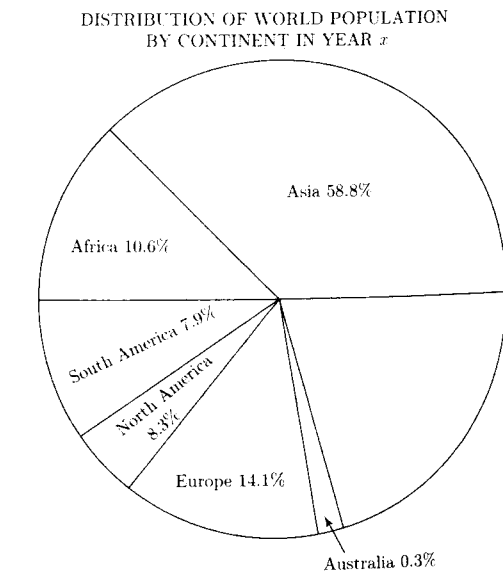
Indicate **all** possible values.

- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 8
- ☐ 9

Click on your choice(s).

Questions 14 through 16 refer to the following graphs.

WORLD ELECTRICITY PRODUCTION BY CONTINENT IN YEAR x
(1 megawatt-hour = 1.000.000 watt-hours)

Electricity Production in Megawatt - hours
<u>Note</u>: Drawn to scale

DISTRIBUTION OF WORLD POPULATION BY CONTINENT IN YEAR x

<u>Note</u>: Not drawn to scale

14 of 20

In Year x, on which continent did electricity production most closely equal electricity production in Europe?

- ○ Africa
- ○ Asia
- ○ Australia
- ○ South America
- ○ North America

15 of 20

In Year x, for which continent was the ratio of electricity production to population the greatest?

- ○ Africa
- ○ Asia
- ○ Australia
- ○ Europe
- ○ North America

16 of 20

In Year x, if South America had a population of approximately 368 million, what was the approximate population, in millions, of Africa?

- ○ 494
- ○ 470
- ○ 274
- ○ 150
- ○ 39

17 of 20

The average (arithmetic mean) weight of 5 crates is 250 pounds. The 2 lightest crates weigh between 200 and 205 pounds each, and the 2 heaviest weigh between 300 and 310 pounds each. If the weight of the fifth crate is x pounds, then x is expressed by which of the following?

- ○ $220 \leq x \leq 250$
- ○ $230 \leq x \leq 260$
- ○ $240 \leq x \leq 270$
- ○ $250 \leq x \leq 270$
- ○ $260 \leq x \leq 280$

18 of 20

A mathematician has devised a theorem that produces a series of numbers $s_1, s_2 \ldots s_x$ according to the principles $s_1 = 2$, $s_2 = 2$, $s_3 = 2$, and for $x \geq 4$, $s_x = 2s_{x-1} + s_{x-2}$. Which of the following equals s_6 ?

- ○ 30
- ○ 34
- ○ 37
- ○ 38
- ○ 40

19 of 20

Y is a point on line segment XZ such that $XY = \frac{1}{2} XZ$. If the length of YZ is $4a + 6$, and the length of XZ is 68, then $a =$

Click on the answer box, then type in a number. Backspace to erase.

20 of 20

Talk show host Ralph Burke has exactly one guest on his show each day, and Burke's show airs every Monday through Friday. Burke always schedules politicians on Mondays and Wednesdays, actors on Tuesdays and athletes on Thursdays, but can have a guest of any one of these three kinds on Friday. No guest appears more than once per week on Burke's show. If Burke has five politicians, three actors and six athletes he could invite, and if no politician is also an actor or an athlete and no actor is also an athlete, how many different schedules of guests from Monday to Friday could Burke create?

- ○ 30
- ○ 1,200
- ○ 3,600
- ○ 4,500
- ○ 6,300

For questions 1 through 4, select one entry for each blank from the corresponding column of choices. Fill all blanks in the way that best completes the text.

1 of 20

Despite what _____ philosophies of child-rearing suggest, there is no imperative that the day-to-day action of raising a child be simple, unambiguous and unchanging—no requirement, in other words, ensures that life follow philosophy.

inexact
aggressive
random
shameless
systematic

2 of 20

Several cultures throughout the world and many informal subcultures within the United States (i)_____ the Winter Solstice, the (ii)_____ day of the year, as a time to welcome back the lengthening of each day.

Blank (i)	Blank (ii)
condemn	lengthiest
burke	shortest
fête	coldest

3 of 20

The novel emphasizes the innate (i)_____ of all humans, showing how each and every character within the narrative is, ultimately, (ii)_____ . This motif becomes tiresome due to its (iii)_____ , however, as character after character is bribed, either explicitly or implicitly, into giving up his or her supposedly cherished beliefs.

Blank (i)	Blank (ii)	Blank (iii)
zealousness	adroit	redundancy
corruptibility	cunning	triviality
optimism	venal	subtlety

4 of 20

Although pirating software, such as borrowing a friend's copy of an installation CD or downloading software from unapproved sources is (i)_____ , many people continue to do so (ii)_____ , almost as if they were unaware of the potential consequences if they were caught.

Blank (i)	Blank (ii)
uncommon	savagely
illegal	sensibly
difficult	unabashedly

5 of 20

Having squandered his life's savings on unprofitable business ventures, the _____ entrepreneur was forced to live in squalor.

former
unlikely
insolvent
perturbed
eccentric

6 of 20

Teachers of composition urge their students to (i)_____ in their writing and instead use clear, simple language. Why use (ii)_____ vocabulary when a (iii)_____ phrasing conveys one's meaning so much more effectively?

Blank (i)	Blank (ii)	Blank (iii)
exscind obloquy	recreant	arcane
eschew obfuscation	redolent	limpid
evince ossification	recondite	droll

Questions 7 through 8 are based on the following reading passage.

That axon malfunction plays a role in neurological disorders has never been in question by neurobiologists, but the nature of the relationship has been a matter of speculation. Enter George Bartzokis. Bartzokis's neurological research at UCLA suggests that many previously little understood disorders such as Alzheimer's disease may be explained by examining the role of the chemical compound myelin.

Myelin is produced by oligodendrocyte cells as a protective sheathing for axons within the nervous system. As humans mature and their neurochemistries grow more complex, oligodendrocyte cells produce increasing amounts of myelin to protect the **byzantine** circuitry inside our nervous systems. An apt comparison may be to the plastic insulation around copper wires. Bereft of myelin, certain areas of the brain may be left vulnerable to short circuiting, resulting in such disorders as ADHD, schizophrenia, or autism.

7 of 20

Consider each of the choices separately and select all that apply.

It can be inferred from the passage that the author would be most likely to agree with which of the following statements regarding the role of myelin?

☐ The levels of myelin in the brain can contribute to the neurological health of individuals.

☐ Increasing the levels of myelin in the brain can reverse the effects of neurological damage.

☐ The levels of myelin in the brain are not fixed throughout the lifetime of an individual.

8 of 20

In the context in which it appears, **byzantine** most nearly means

○ devious

○ intricate

○ mature

○ beautiful

○ electronic

9 of 20

The cost of operating many small college administrative offices is significantly reduced when the college replaces its heavily compensated administrative assistants with part-time work-study students whose earnings are partially subsidized by the government. Therefore, large universities should follow suit. They will certainly realize more financial gains than do the small colleges.

In the above argument it is assumed that

○ replacing administrative assistants with work-study students is more cost-effective for small colleges than for large universities

○ large universities usually depend upon small colleges for development of money-saving strategies

○ the financial gains realized by large universities would not be as great were they to use non-work-study students in place of the administrative assistants

○ work-study students could feasibly fulfill a similar or greater proportion of administrative assistant jobs at large universities than they could at small colleges

○ the smaller the college or university, the easier it is for that college or university to control costs

Questions 10 through 11 are based on the following reading passage.

The nineteenth century marked a revolutionary change in the way that wealth was perceived in England. As landed wealth gave way to monied wealth, investments became increasingly speculative.

A popular investment vehicle was the three-percent consol which took its name from the fact that it paid three pounds on a hundred pound investment. The drawback to the consol was that once issued, there was no easy way for the government to buy back the debt. To address the problem, the British government instituted a sinking fund, using tax revenue to buy back the bonds in the open market. The fact that the consol had no fixed maturity date ensured that any change in interest rate was fully reflected in the capital value of the bond. The often wild fluctuation of interest rates ensured the consol's popularity with speculative traders.

10 of 20

Which of the following best describes the relationship of the first paragraph of the passage to the passage as a whole?

- ○ It provides a generalization which is later supported in the passage.
- ○ It provides an antithesis to the author's main argument.
- ○ It briefly compares two different investment strategies.
- ○ It explains an investment vehicle that is later examined in greater detail.
- ○ It provides a historical framework by which the nature of the nineteenth century investor can more easily be understood.

11 of 20

In the second paragraph, select the sentence that describes a solution to a problem.

*For questions 12 through 15, select the **two** answer choices that, when used to complete the sentence, fit the meaning of the sentence as a whole **and** produce completed sentences that are alike in meaning.*

12 of 20

Owing to a combination of its proximity and _____ atmosphere, Mars is the only planet in our solar system whose surface details can be discerned from the Earth.

- ☐ viscous
- ☐ ossified
- ☐ rarefied
- ☐ estimable
- ☐ copious
- ☐ meager

13 of 20

Using the hardships of the Joad family as a model, John Steinbeck's *The Grapes of Wrath* effectively demonstrated how one clan's struggles epitomized the _____ experienced by an entire country.

- ☐ reticence
- ☐ adversity
- ☐ repudiation
- ☐ quiescence
- ☐ verisimilitude
- ☐ tribulation

14 of 20

The Mayan pyramid of Kukulkan is more than just _____ edifice; this imposing structure was built to create a chirping echo whenever people clap their hands on the staircase. This echo sounds just like the chirp of the Quetzal, a bird which is sacred in the Mayan culture.

- ☐ a venerable
- ☐ a humble
- ☐ a beguiling
- ☐ an august
- ☐ a specious
- ☐ a prosaic

15 of 20

Some wealthy city-dwellers become enchanted with the prospect of trading their hectic schedules for a bucolic life in the countryside, and they buy property with a pleasant view of farmland--only to find the stench of the livestock so _____ that they move back to the city.

- ☐ bovine
- ☐ pastoral
- ☐ noisome
- ☐ atavistic
- ☐ olfactory
- ☐ mephitic

Questions 16 through 18 are based on the following reading passage.

Often the most influential developments initially appear to be of minor significance. Take stirrups. Without them, horse and rider are, in terms of force, separate entities; lances can be used from horseback, but only by throwing or stabbing, and mounted warriors gain only height and mobility. A lance couched under the rider's arm, unifying the force of rider and weapon, would throw its wielder backwards off the horse at impact. Stirrups unify lance, rider, and horse into a force capable of unprecedented violence. This development left unusually clear archaeological markers: Lethality assured, lances evolved barbs meant to slow progress after impact, lest the weight of body pull rider from horse. The change presaged the dominance of mounted combat, and increasingly expensive equipment destroyed the venerable ideal of freeman warriors. New technology demanded military aristocracy, and chivalric culture bore its marks for a millennium.

16 of 20

The primary purpose of the passage is to

- ○ discuss the influence of a recent archeological discovery
- ○ explore the social significance of a technological innovation
- ○ assess the state of research in a given field
- ○ lament the destruction of certain social ideals
- ○ explicate the physics of combat artillery

17 of 20

It can be inferred from the passage that the author believes which of the following about medieval innovations in military technology?

- ○ Their study merits additional research.
- ○ They had more lasting influence than did those of the ancient world.
- ○ Most of them had equally far-reaching repercussions.
- ○ Prior to their application, the military value of horses was considered insignificant.
- ○ Many of them are archaeologically ambiguous.

SECTION 5: VERBAL REASONING

Click on the sentence in the passage in which the author cites the physical effects of a technological innovation being discussed as an example of a previous generalization.

Questions 19 through 20 are based on the following reading passage.

Few mathematical constructs seem as conceptually simple as that of randomness. According to the traditional definition, a number is random if it is chosen purely as the result of a probabilistic mechanism such as the roll of a fair die. In their groundbreaking work regarding complexity and the limitations of formal systems, mathematicians Gregory Chaitin and A.N. Kolmogorov force us to consider this last claim more closely.

Consider two possible outcomes of throwing a fair die three times: first, 1, 6, and 2; second 3, 3, and 3. Now let us construct two three-member sets based on the results. Though the first set—{1,6,2}—intuitively seems more random than the second—{3,3,3}, they are each as likely to occur, and thus according to the accepted definition, must be considered equally random. This unwelcome result prompts Chaitin and Kolmogorov to suggest the need for a new standard of randomness, one that relies on the internal coherence of the set as opposed to its origin.

Which of the following best describes the organization of the passage as whole?

○ A concept is introduced; a traditional definition is put forward; a thought experiment is described; a new definition is proposed; the traditional definition is amended as a result.

○ A concept is introduced; a traditional definition is supported by authorities; a thought experiment is described; the implications of the experiment are discussed.

○ A concept is introduced; a traditional definition is considered and rejected; a thought experiment is described; a new definition is proposed.

○ A concept is introduced; a traditional definition is called into question; a thought experiment is described; the implications of the experiment are discussed.

○ A concept is introduced; authorities are called in to reevaluate a definition; a thought experiment is described; the implications of the experiment are considered and rejected.

Consider each of the choices separately and select all that apply.

Which of the following is an inference made in the passage above?

☐ The results of the same probabilistic mechanism will each be as likely as the other to occur.

☐ According to the traditional definition of randomness, two numbers should be considered equally random if they result from the same probabilistic mechanism.

☐ Different probabilistic mechanisms are likely to result in similar outcomes.

NO TEST MATERIAL ON THIS PAGE

Questions 1 through 7 each consist of two quantities, Quantity A and Quantity B. You are to compare the two quantities and choose the appropriate answer. In a question, information concerning one or both of the quantities to be compared is centered above the two columns. A symbol that appears in both columns represents the same thing in Quantity A as it does in Quantity B.

1 of 20

$$\frac{x}{6} + 2 = \frac{6}{2}$$

$$\frac{y}{3} + 2 = \frac{9}{3}$$

Quantity A	**Quantity B**
$\dfrac{(x-1)}{y}$	$\dfrac{(y-1)}{x}$

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

2 of 20

Quantity A	**Quantity B**
The distance that Bob drives in 3 hours at a speed of 44 miles per hour	The distance that Inez drives in 2 hours and 30 minutes at a speed of 50 miles per hour

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

3 of 20

$$0 < x < y < 1$$

Quantity A	**Quantity B**
$\dfrac{x}{y}$	$\dfrac{y}{x}$

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

4 of 20

$$y > 0$$

Quantity A	**Quantity B**
$0.98(8.21)y$	$\dfrac{821y}{98}$

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

5 of 20

12.5 percent of k is 80.
k is y percent of 80.

Quantity A	**Quantity B**
y	650

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

6 of 20

$$\text{Set } P = \{a, b, c, d, e, f, g\}$$
$$\text{Set } Q = \{a, b, c, d, e, f\}$$

$a, b, c, d, e, f,$ and g are distinct integers

Quantity A	**Quantity B**
Range of Set P	Range of Set Q

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

7 of 20

Series F is defined as $F_n = F_{(n-1)} + 3$ and $F_1 = 10$.

Quantity A	**Quantity B**
The sum of F_4 through F_{10}	The sum of F_6 through F_{11}

○ Quantity A is greater.

○ Quantity B is greater.

○ The two quantities are equal.

○ The relationship cannot be determined from the information given.

8 of 20

A number, n, is multiplied by 6. The product is increased by 24. Finally, the entire quantity is divided by 3. Which of the following expresses the final result in terms of n ?

○ $\dfrac{n}{3} + 8$

○ $\dfrac{n + 24}{2}$

○ $2n + 8$

○ $3n + 24$

○ $16n$

9 of 20

The average (arithmetic mean) of a and b is 10, and the average (arithmetic mean) of c and d is 7. If the average (arithmetic mean) of a, b, and c is 8, what is the value of d ?

$$\boxed{}$$

Click on the answer box, then type in a number. Backspace to erase.

10 of 20

In the coordinate plane, square $ABCD$ has vertices at A (3, 7), B (3, 12), C (8, 12), and D (8, 7). What is the area of $ABCD$?
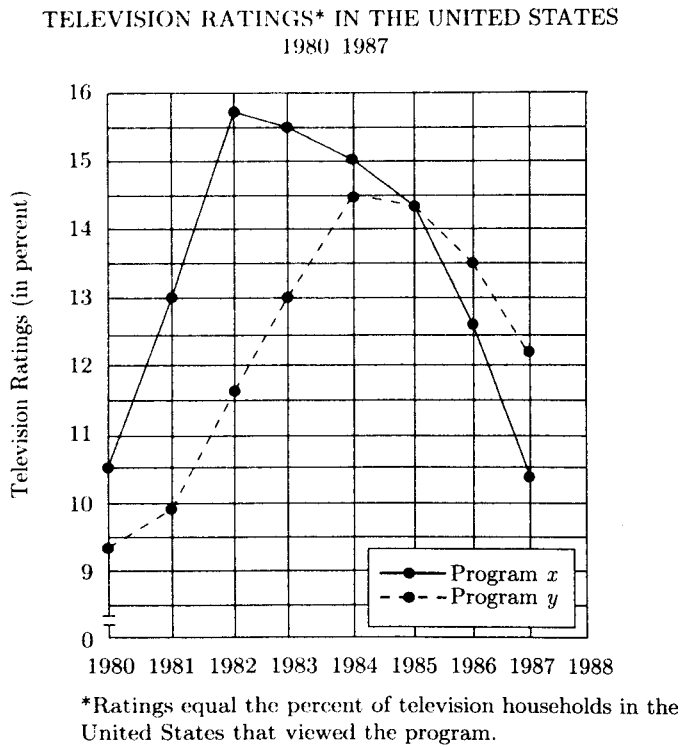
○ 16

○ 20

○ 25

○ 30

○ 36

11 of 20

Houses Sold in July		
Week	Peter	Dylan
Week 1	4	9
Week 2	6	3
Week 3	10	10
Week 4	4	2

The table above shows the number of houses sold per week for the month of July by two real estate agents, Peter and Dylan. What is the difference between the median number of houses sold per week by Dylan and the median number of houses sold per week by Peter?

○ 0

○ 1

○ 2

○ 5

○ 6

Questions 12 through 14 refer to the following graph.

TELEVISION RATINGS* IN THE UNITED STATES
1980–1987

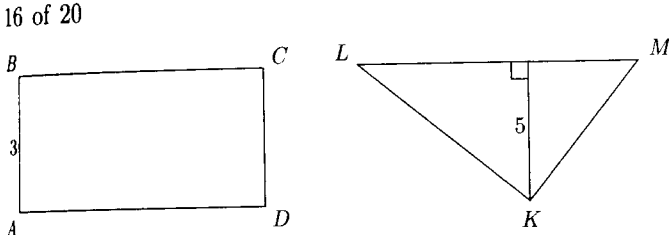*Ratings equal the percent of television households in the United States that viewed the program.

12 of 20

For how many of the years shown did the ratings for Program y increase over the ratings for Program y the previous year?

○ Two

○ Three

○ Four

○ Five

○ Six

13 of 20

In 1995 there were 95 million television households in the United States. If, in 1983, there were 80 percent of the number of television households in 1995, then approximately how many television households in millions viewed Program y in 1983 ?

○ 80

○ 76

○ 15

○ 12

○ 10

14 of 20

Approximately what was the average number of television households in the United States that viewed Program x from 1981 through 1985 inclusive?

○ 12.7%

○ 14.8%

○ 15.6%

○ 18.5%

○ It cannot be determined from the information given.

15 of 20

At Flo's Pancake House, pancakes can be ordered with any of six possible toppings. How many different ways are there to order pancakes with three toppings?

○ 20

○ 40

○ 54

○ 120

○ 720

16 of 20

The area of triangle KLM is equal to the area of rectangle $ABCD$. If the perimeter of $ABCD$ is 16, what is the length of LM ?
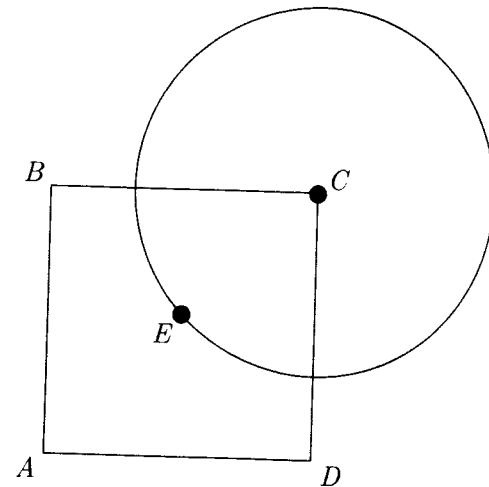
○ $\dfrac{3}{2}$

○ 3

○ $\dfrac{16}{5}$

○ 5

○ 6

17 of 20

Each of the 576 houses in Tenantville is owned by one of the following landlords: Matt, Gavin, Angela, or Susan. Matt and Angela together own twice as many houses as Gavin and Susan own. If Gavin owns 100 more houses than Susan owns, and Matt owns 100 more houses than Angela owns, how many houses does Susan own?

○ 46

○ 142

○ 146

○ 192

○ 242

18 of 20

One-quarter of the cars that an automobile manufacturer produces are sports cars, and the rest are sedans. If one-fifth of the cars that the manufacturer produces are red and one-third of the sports cars are red, then what fraction of the sedans is red?

Click on the answer boxes, then type numbers. Backspace to erase.

19 of 20

A candy jar has 4 lime, 10 cherry, 8 orange, and x grape candies. Tom randomly selects a candy from the jar. The probability that he selects an orange candy is greater than 20 percent. Which of the following could be the value of x ?

Indicate **all** possible values.

☐ 10

☐ 14

☐ 18

☐ 22

☐ 24

☐ 28

Click on your choice(s).

Square $ABCD$ and a circle with center C intersect as shown. If point E is at the center of $ABCD$ and if the radius of circle C is k, then what is the area of $ABCD$, in terms of k ?

○ $\dfrac{k^2}{2\pi}$

○ $\dfrac{\pi k^2}{2}$

○ πk^2

○ k^2

○ $2k^2$

Chapter 19
Answers and
Explanations for
Practice Test 2

INTERPRETING YOUR RESULTS

After you check your answers on the following pages, fill out this sheet to interpret your results.

Analytic Writing Sections

To evaluate your performance on the Analytic Writing sections, compare your response to the advice and samples in the Analytic Writing chapter.

Verbal Reasoning

Refer to the explanations to check your answers. Count of number of questions you got correct in each Verbal Reasoning section, and calculate the total number correct. Find the section of the Interpretive Guide (below) that corresponds to your total to get an idea of how your performance compares to that of other test takers.

Test 1	# Correct
Section 4	
Section 6	
Total	

Test 2	# Correct
Section 3	
Section 5	
Total	

Quantitative Reasoning

Refer to the explanations to check your answers. Count of number of questions you got correct in each Quantitative Reasoning section, and calculate the total number correct. Find the section of the Interpretive Guide (below) that corresponds to your total to get an idea of how your performance compares to that of other test takers.

Test 1	# Correct
Section 3	
Section 5	
Total	

Test 2	# Correct
Section 4	
Section 6	
Total	

Interpretive Guide

The table below provides a guide for interpreting your performance based on the number of questions you got correct in each subject.

Subject	Well Above Average	Above Average	Average	Below Average
Verbal Reasoning	51–56	40–50	23–39	1–22
Quantitative Reasoning	48–52	40–47	24–39	1–23

Section 3

1. **inflection** and **utilized**

   For the first blank, the trigger "more important" tells you to change direction from "actual words." Also, *sarcastically* is an example of tone. Look for a choice that means tone. *Inflection* fits tone. *Pitch* is non-verbal, but it does not match the example of sarcastically. *Accuracy* does not fit. For the second blank, look for a word that means *conveyed* or *spoken. Utilized* is the best match. *Implied* and *repudiated* don't fit.

2. **expressive, relegated**, and **conflict with**

   Try working with the first blank first. The clue is *artistic,* and the trigger *and* indicates the first blank should be a word that is the same as artistic. *Expressive* is the best choice; neither *tedious* nor *tiresome* works. Though changes the direction of the sentence—though the studio likes the creative/artistic aspect, something negative must be happening to creativity—it's brought down to a secondary position. Eliminate *uplifted* and *compared* for blank (ii) because they are not negative, and choose *relegated.* Turning to the third blank, "organization and hierarchy" are in opposition to *creativity,* and *conflict with* makes the most sense.

3. **axiomatic**

   You are given the clue that the beliefs "are in conflict" and "cannot all be correct." Therefore, whatever goes into the blank must be synonymous with *correct* or something we can infer correctness from. The correct answer is *axiomatic,* which means self-evident or universally true. *Disputable* is the opposite of what the sentence requires, and *ubiquitous,* and *historic* are not synonymous with self-evident. Although *empirical,* meaning derived from observation, might fit science, it is not a good fit for religion.

4. **staved off, contributed to**, and **affliction**

   The clue "Although most medical, preventative ointments commonly in use," tells you that most ointments would prevent an infection, but the one Helen used did not. Recycle the clue, and put a word that means prevent in the first blank; *staved off* is the best match. Work with the second and third blanks together. The ointment did not prevent an infection, and the clue "much to her dismay" tells you that something bad happened. The only pair that makes sense together is *contributed to* and *affliction* because they tell you that the ointment made her problem worse.

5. **glib, spontaneity**, and **tepid**

   For the first blank, the clue is *offhand remarks,* so the blank means something like "offhand." *Glib,* which means "superficial or showing a lack of concern," is the closest match for this. Sticking to *prepared talking points* can result in a lack of "excitement" or "naturalness," which *spontaneity* matches. For the last blank, you know the crowd's responses are *lukewarm,* so the answer for that blank is *tepid.*

6. **shallow**

   The clue is the entire clause that follows the semicolon, "its characters take trivial concerns seriously while glibly dismissing important ones." Look for a word that means superficial or petty to go in the blank. The only one that fits is *shallow.*

7. B

The third paragraph states that if too much Haber nitrogen were applied, "the wheat crop would grow taller and thicker, eventually toppling over and rotting." Losing a crop would be an undesirable effect, making choice (B) the best answer. Eliminate choice (A) because the passage doesn't compare the effects of Haber nitrogen on different kinds of crops. The passage doesn't provide any information to support choices (C) and (D). Choice (E) contradicts the passage, which says the farmers were wary of the substance.

8. E

According to the first paragraph, there has been no sharp decline in the world's population and, therefore, we can surmise that food production has been sufficient to allow for the existing population growth, as in answer choice (A). In the second paragraph, the author mentions the invention of the tractor as one of the factors that allowed more crops to be grown for human consumption. This reflects the technological innovation in answer choice (B). In the last paragraph, the author notes that the complexity of the wheat genome has hindered attempts at genetic alteration. Thus, answer choice (C) is implied as well. The author notes that increases in crop production through the invention of the tractor and ammonia prevented Malthus's predictions from being realized, and this rules out answer choice (D). The extent of the impact of genetic engineering is not clear. We don't know that a Malthusian disaster would have been a *certainty* without genetic engineering. Therefore, the correct answer is choice (E) because it is not implied.

9. D

The first paragraph states that Malthus believed that "population increases in a geometric ratio, while the means of subsistence increases in an arithmetic ratio." More simply put, Malthus argued that population growth happens at a significantly faster rate than food production. Only answer choice (D) demonstrates this.

10. E

The first paragraph presents Malthus's prediction about what would happen if population growth were to outstrip food production. If there were too many people and not enough food, you would expect a significant or rapid population decline. Look for a word to replace *precipitous* that is similar to significant or rapid. *Sharp* is the best word.

11. B

The "rosy prospect" refers to the previous paragraph's discussion of the booming tourism industry in Australia, which implies a positive future, and the "cloud on the horizon" refers to the conflict between the rights of the Aborigines and the need for the money from tourism, a potential problem. Choice (A) incorrectly interprets the quote as referring to a literal *horizon and prospect*. Choice (C) is also too literal, taking *prospect* to mean view. Choice (D) is incorrect because, although this may be true based on later information in the passage, it is not an accurate interpretation of this phrase. Choice (E) is too strong because the future is described as generally good, not hopeless.

12. A, B, and C

All three statements are given as sources of the conflict. Choice (A), economic hardship, is mentioned in the third paragraph. Due to financial difficulties, many regions are unwilling to give up the income derived from tourists visiting Aboriginal lands. Choice (B) is discussed in the second paragraph. The expansion of Western culture is the reason that the Aborigines have moved inland and abandoned other sacred sites. Choice (C) is mentioned in the first sentence. Tourism is described as particularly important due to the "dearth of natural resources."

13. morose and dour

The first part of the clue is "mercurial character," which means George's moods change frequently. The second part of the clue is "one moment he was optimistic about his prospects," and the trigger is "the next he was." Thus, the blank should be the opposite of optimistic; look for words that mean pessimistic. *Morose* and *dour* are both similar to pessimistic. *Hopeful* and *buoyant* have the opposite meaning, and *witty* and *immoral* are not related.

14. tyro and neophyte

The clue is that she "began her first job." Also, the contrast of "wealthy suburb" and "llama caretaker on a rural farm" suggests that she'd feel out of place or lacking in experience at her first job. Look for words that mean beginner. *Tyro* and *neophyte* are the only words that mean beginner. *Agronomist* and *cultivator* are traps for people who focused too heavily on the farm. *Concierge* and *curator* are traps for people who focused too heavily on caretaker.

15. embellished and colored

The clue "King Duncan's death at the hand of Macbeth comprises the play's only historical truth" tells you that the version of events related in Macbeth was not very accurate. Does *anachronistic* mean inaccurate? No; cross it out. What about *effusive*? No. In contrast, *embellished* works well, but *prosaic* and *serpentine* do not. Finally, *colored*—which, like embellished, means misrepresented or distorted—fits the blank nicely.

16. thewy and sinewy

The word that goes into the blank describes superheroes, who the clue phrase describes as having "every detail of their musculatures would be visible through their clothing." Clearly, something like muscular is called for, and *thewy* and *sinewy* both fit the bill. The other four words don't fit: *superfluous* means unnecessary, *pneumatic* means full of air, *flocculent* means covered in wool, and *atrophied* means shriveled due to disuse.

17. A and C

Answer choice (A) is correct because the passage states that during cell division many of the DNA bases are lost, also we know that over the course of many cell divisions the telomere buffer may disappear entirely. Choice (B) is not correct because we have no information about what scientists used to think about telomeres. Choice (C) is correct because we are told that one function of telomeres is to mitigate the loss of DNA bases. If no bases are lost, then this role is not important any more.

18. A

The first paragraph says that without telomere buffers "every cell division would be a step into senescence, and the onset of old age would begin at birth," and the last sentence of the passage states that "many ailments associated with normal old age begin only after the telomere buffer has been exhausted through years of cell division." If the protection offered by the buffers didn't exist, you could expect problems related to aging to start sooner, as choice (A) suggests. Choice (B) goes too far; though the passage speaks on the onset of old age at birth, we can't be sure that almost no one would live past childhood. The passage provides no support for choices (C), (D), or (E).

19. B

The passage as a whole provides a short history of two types of early musical education, the rote method and the note method. Nowhere in the passage does the author come out in favor of either method, thereby ruling out choices (A) and (C). Given that Reverend Walter taught music by the note method he developed, answer choice (D) doesn't make sense. While it is true that rote learning was inconsistently practiced, as choice (E) states, this does not answer the question.

20. "The 'note vs. rote' controversy in music education…"

The use of the word "controversy" in the final paragraph is the only indication the author gives that the decision between "note" or "rote" as a musical learning technique was in any way contentious.

Section 4

1. **C**

    Converting the decimal to a fraction: 0.15 becomes $\frac{15}{100}$, which reduces to $\frac{3}{20}$. You could also just punch this into your calculator and find that $\frac{3}{20}$ is 0.15. The two quantities are equal.

2. **A**

    Translate and solve each expression. The expression "5 is r percent of 25" becomes $5 = \frac{r}{100} \times 25$. So, $r = 20$. The expression "s is 25 percent of 60" becomes $s = \frac{25}{100} \times 60$. So, $s = 15$, and Quantity A is greater.

3. **A**

    Plug In for this question. Let $h = 3$, which makes $g = 6$. Quantity A equals $\frac{6}{1} = 6$ and Quantity B equals $\frac{1}{3}$. Quantity A can be greater than Quantity B, so eliminate answer choices (B) and (C). Because g and h are positive integers, Quantity A will always be greater than 1 and Quantity B will always be less than or equal to 1. Quantity A will always be greater than Quantity B.

4. **B**

    The average is the sum divided by the number of elements. Because three elements make up both averages, you can simply compare the sum of each set. $67 + 78 + 101 + x = 246 + x$, and $66 + 79 + 102 + x = 247 + x$. Thus, Quantity B is greater.

5. **A**

    Although the amount of increase was the same in both years, the percent increase was greater from 1988 to 1989. For example, say there were 10 million tons in 1988. The percent increase was $\frac{.79}{10}$. Then in 1989 there were 10.79 tons, so the percent increase from 1989 to 1990 was $\frac{.79}{10.79}$. Quantity A must be greater.

6. **D**

    Plug In. Make $m = 2$ and $n = 3$. For Quantity A, the weight of 2 peanuts at $3 + 3$ mg each is $2 \times 6 = 12$ mg. For Quantity B, the weight of 3 almonds at $2 + 3$ mg each is $3 \times 5 = 15$ mg. Eliminate choices (A) and (C). Plug In again to see if you can get a different result. Keep $m = 2$, and change n to 2. For Quantity A, the weight of 2 peanuts at $2 + 3$ mg each is $2 \times 5 = 10$ mg. For Quantity B, the weight of 2 almonds at $2 + 3$ mg each is $2 \times 5 = 10$ mg. Eliminate choice (B), and choose choice (D).

7. **C**

    Because $575 \div 5 = 115$, you can rewrite Quantity A as $5^{27}(5)(115)$, or $5^{28}(115)$. The quantities are equal.

8. **B**

    For Quantity A, there are three ways to get an even number (these are: 2, 4, 6). So, the probability of "rolling an even" and then "rolling an even" is $\frac{3}{6} \times \frac{3}{6} = \frac{1}{4}$. For multiple independent events, multiply the probabilities. For Quantity B, there are 4 ways to not get a multiple of 3 (these are: 1, 2, 4, 5). The probability of "not rolling a multiple of 3" then "not rolling a multiple of 3" is $\frac{4}{6} \times \frac{4}{6} = \frac{4}{9}$. Quantity B is greater than Quantity A.

9. **B**

    There are variables in the answer choice, so Plug In. If $r = 2$, then $4((2) - s) = -2$. Divide both sides by 4 to find $2 - s = -0.5$. So, $s = 2.5$. The target answer is r, which is 2. Go to the answer choices and Plug In 2.5 for s. Answer choice (B) is the only answer choice that matches your target of 2.

10. **10.5**

    25 percent is .25, and 42 percent is .42. Multiply the quantities to find 42 percent of 25 percent: $.25 \times .42 = .105$. Change the product into a percentage by multiplying by 100: 10.5 percent of employees transfer lines.

11. **D**

    Set up a ratio box:

	Flour	Eggs	Yeast	Salt	Total
Ratio	11	9	3	2	25
Multiply by			$\frac{4}{5}$		$\frac{4}{5}$
Actual			$2\frac{2}{5}$		20

    Because the ratio total is 25, and the actual total is 20, the "multiply by" number is $\frac{4}{5}$. Yeast is 3, so $3 \times \frac{4}{5} = \frac{12}{5} = 2\frac{2}{5}$. Be sure to use labels in your ratio box.

12. **C**

    For this question, you can FOIL: $(\sqrt{5})^2 - (\sqrt{3})(\sqrt{5}) - (\sqrt{5})(\sqrt{3}) + (\sqrt{3})^2$. This simplifies to $5 - 2\sqrt{15} + 3$, or $8 - 2\sqrt{15}$.

13. **A, C, D, and E**

    Plug the information given into the formula for the area of a triangle to learn more about the relationship between x and y: $A = \frac{bh}{2} = \frac{xy}{2} = 108$. The product of x and y is 216, so x needs to be a factor of 216. The only number in the answer choices that is not a factor of 216 is 5. The remaining choices are possible values of x.

14. **B**

Europe's electricity production (2,000 megawatt-hours) most closely matches that of Asia (1,900 megawatt-hours).

15. **C**

The ratio for Australia is 100 to 0.003, or $\dfrac{100}{0.003}$. This is approximately equal to $\dfrac{33.333}{1}$, or 33,333 : 1.

16. **A**

Africa's population is 10.6 percent on the pie chart; South America's is 7.9 percent. Right away, you can eliminate all of the answer choices that are smaller than 368. Now you are left with choices (A) and (B). Because the question gives you South America's population (368 million), you can use a proportion to find the population of Africa. The proportion would look like this: $\dfrac{.079}{368} = \dfrac{.106}{x}$, where x is equal to the population of Africa. Cross-multiplying gives you $.079 \times x = .106 \times 368$, and $x = 493.7$.

17. **A**

If the average of 5 crates is 250, then their total = $5 \times 250 = 1,250$. To find the high end of the range for the fifth crate, make the other crates as light as possible: Make the two lightest crates 200 each, for a total of 400, and the two heaviest crates 300 each, for a total of 600; together, those four crates weigh 1,000 pounds, leaving 250 pounds for x. Because only choice (A) sets 250 pounds as the high end, you can eliminate choices (B), (C), (D), and (E).

18. **B**

Substitute 6 for x in the equation, $s_x = 2s_{x-1} + s_{x-2}$ and work carefully from there. $s_6 = 2 s_{6-1} + s_{6-2}$, which simplifies to $s_6 = 2s_5 + s_4$. However you don't know s_5 or s_4. Use the equation to find these missing terms. $s_4 = 2s_3 + s_2$ and the problem tells you s_2 and s_3 are equal to 2. $s_4 = (2 \times 2) + 2$, which is 6. Now you need to find s_5. Using the equation, you get $s_5 = (2 \times 6) + 2$, which is 14. Now that you know s_5 and s_4, go back to your original equation, $s_6 = 2s_5 + s_4$, and $s_6 = (2 \times 14) + 6$, which is 34.

19. **7**

Always draw a figure when one is not provided. In this case, line segment XZ has a length of 68. Point Y is the midpoint of the segment, and $2XY = XZ$. To find the lengths of these segments, divide 68 by 2. Segment $YZ = 34$. Because $YZ = 4a + 6$, you know that $34 = 4a + 6$, and $a = 7$.

20. **C**

Make a spot for each day, and fill in the number of guests who could occupy that spot. Burke has 5 choices for Monday, 3 choices for Tuesday, 4 choices for Wednesday (because one politician was chosen on Monday), 6 choices for Thursday, and 10 choices for Friday (because 4 of the 14 potential guests have already been chosen). Multiply these to arrive at 3,600 different schedules.

Section 5

1. **systematic**

The clue is "simple, unambiguous, and unchanging." The trigger word is "in other words." The trigger word maintains the direction of the clue. Therefore, find a word that means regimented. *Systematic* is the best match.

2. **fête** and **shortest**

For the first blank, the clue of "welcome back" tells you to look for a word that means welcome or celebrate. *Fête* is the only choice that fits. The clue for the second blank is "welcome back the lengthening," which suggests that the Solstice must be a short day. *Lengthiest* is the opposite of *shortest*. Although it is wintertime, you don't know that the solstice is necessarily the coldest day of the year.

3. **corruptibility, venal,** and **redundancy**

The first two blanks are related, but there isn't a strong clue for either one in the first part, so let's start with the third blank. Since the motif is *tiresome*, the third blank must mean something close to "repetitive." *Redundancy* matches this. At the end of the paragraph, each character is *bribed...into giving up...beliefs.* So the first two blanks must mean "bribable." *Corruptibility* in the first blank and *venal* in the second both match this.

4. **illegal** and **unabashedly**

For the first blank, the clues "pirating software" and "downloading software from unapproved sources" describe unauthorized activities, and *illegal* is the best fit. *Uncommon* and *difficult* are incorrect because the sentence says that "many people continue to do so." If people are doing something despite its illegality and "almost as if they were unaware of the potential consequences if they were caught," you could describe them as acting *brashly. Unabashedly* is the best fit.

5. **insolvent**

The phrase "squandered his life's savings on unprofitable business ventures" tells you that the entrepreneur had no money left. The blank needs a word that means broke. *Former* and *unlikely* are tempting choices, but they don't match broke. Eliminate them. *Eccentric* also doesn't match, while *perturbed* only describes the entrepreneur's possible feelings. *Insolvent* agrees with the clue, so keep it.

6. **eschew obfuscation, recondite,** and **limpid**

The key clue is that the teachers urge students to "use clear, simple language." The trigger *instead* indicates that the phrase that goes into the blank will present an alternative to using clear, simple language, while the and indicates that the phrase will nevertheless agree with the clue. Something like avoid difficult language would be best: difficult language is the alternative to clear, simple language, but the two phrases still agree because the difficult language is something to avoid. Thus, *eschew obfuscation* is best: *eschew* means avoid, while *obfuscation* means the act of hiding the meaning of something. *Exscind obloquy* means to cut out critical language, while *evince ossification* means to show excessive rigidity, neither of which is appropriate here. The second blank needs a word that means difficult or obscure because teachers call into question the use of difficult vocabulary; recondite means obscure and hard to understand. *Recreant* means cowardly; *redolent* means fragrant. The final blank requires a word like *clear* because that is the type of language that "conveys one's meaning so much more effectively." *Limpid* means easily understood, and so is correct.

7. **A and C**

Answer choice (A) is supported because the passage says that myelin protects the brain's circuitry. Answer choice (C) is supported by the fact that "as humans mature" increasing levels of myelin need to be produced. While the passage suggests that a lack of myelin leaves the brain vulnerable, that doesn't mean that increasing the levels of myelin will reverse damage.

8. B

In the passage, *byzantine* refers to the "circuitry inside our nervous systems." Previously, the circuitry is described as growing more complex, so you need to find a word with a similar meaning. Answer choice (A) is an alternate meaning for byzantine, but is not supported by the passage. Answer choices (C), (D), and (E) do not have meanings similar to complex.

9. D

The argument concludes that large universities should utilize work-study students rather than administrative assistants. The premise is that a similar strategy realizes a cost savings at small colleges. This is an argument by analogy. Hence, the argument assumes that there are similar conditions at small colleges and at large universities. Choice (D) says that students at universities are just as qualified to take over the administrative roles as they are in small colleges. In other words, the administrative jobs at universities are not appreciably different than those at colleges. For choice (A), whether the practice would be of greater benefit to the small colleges is out of scope. For choice (B), whether large universities usually depend on small colleges for ideas is out of scope. For choice (C), the issue of non-work-study students is out of scope. For choice (E), whether anyone has an easier ride than anyone else is out of scope.

10. A

The first paragraph acts as an introduction to the rest of the passage. The author notes that in the nineteenth century "investments became increasingly speculative." In the last paragraph, the author explains that due to fluctuating interest rates, the consol was popular with speculative investors. There is no support in the passage for (B), (C), or (D). Although the first paragraph provides a historical framework, as suggested in answer choice (E), it does not provide a way "by which the nature of the nineteenth-century investor" could be understood.

11. To address the problem, the British government instituted a sinking fund, using tax revenue to buy back the bonds in the open market.

The second paragraph has five sentences so this question has five answer choices. The third sentence begins, "To address the problem...." This is a clear indication that the sentence describes a solution to a problem. The correct answer is the third sentence.

12. rarefied and meager

What sort of atmosphere would make Mars the only planet "whose surface details can be discerned from the Earth?" You need a word that means transparent or thin for the blank. *Viscous* takes you in the wrong direction, so toss it. The next choice, *ossified*, makes no sense; toss that one, too. In contrast, *rarefied* works well, so hang onto it. Meanwhile, a *copious* atmosphere would definitely not be easy to see through, so cross out that choice. *Meager* fits nicely and agrees with *rarefied*, making those two the best answers.

13. adversity and tribulation

The clue is "Using the hardships of the Joad family as a model." Recycle *hardships*, and use POE. Does *reticence* mean hardships? No; cross it out. *Adversity* works, so leave it. Do the same for the remaining choices. Only *tribulation* agrees with hardships, so that's the other correct answer.

14. a venerable and an august

The blank is a description of the pyramid. The clue is "imposing structure" because this is the only other description of the pyramid. *Venerable* and *august* are the only words that match *imposing*.

15. noisome and mephitic

The word that fills the blank must describe "the stench of the livestock," which is so malodorous that it drives the newcomers back to the city; it must mean something like, well, stinky! Both *noisome* and *mephitic* are appropriate choices. The other words don't work; if you were tempted by *olfactory*, realize that it simply means "related to the sense of smell" and does not actually describe a particular scent.

16. B

Answer choice (B) correctly sums up the purpose of the passage: It explores the social significance—the creation of a military aristocracy and chivalric culture—of a technological innovation—the stirrup. Choice (A) is incorrect because nothing in the passage suggests that this discussion has a basis in recent discovery. Answer choice (C) is too broad for the limited subject matter discussed. Choice (D) is too extreme. Answer choice (E) is incorrect because the physics, while important in connecting the stirrup to its social effects, isn't really the point of the passage—and, in any event, the physics relates to cavalry, not artillery.

17. E

Answer choice (E) is supported by the passage because the sixth sentence suggests that the development of the barbed lance serves as an "unusually clear" marker. Choice (A) is incorrect because no additional subjects for research are brought up in the passage. Choices (B) and (C) both require comparisons beyond the scope of the information in the passage: No other technology, ancient or medieval, was discussed. Answer choice (D), finally, is an extreme overstatement: Although the stirrup increased the military value of the horse, nowhere is it suggested that it had previously been considered militarily insignificant.

18. "Stirrups unify lance, rider, and horse into a force capable..."

The "previous generalization" is the one in the first sentence, and the "technological innovation" being discussed is, of course, the stirrup, which comes in the second sentence. The question really asks about the stirrup's physical effects, which are discussed in the fifth sentence. The third and fourth sentences describe the situation prior to the development of stirrups. The sixth sentence shifts emphasis and explains that the innovation left a record. The final two sentences explain how the innovation changed the military and social landscape—the cultural effects, in other words, rather than the physical ones.

19. D

Choice (D) describes the organization of the passage. Answer choice (A) can be eliminated because the traditional definition is never amended. Answer choice (B) can be eliminated because the authorities do not support the traditional theory. Answer choice (C) can be eliminated because no new definition is proposed. Answer choice (E) can be eliminated because the "implications of the experiment" are not rejected.

20. A and B

The author's dismissal of the traditional definition of randomness rests upon the premises that the results of the same probabilistic mechanism will all have the same likelihood of occurring, and, as such, should be considered equally probable. The passage never mentions how the results of different probabilistic mechanisms relate to each other, so eliminate choice (C).

Section 6

1. A

Solve for x in the top equation, $\frac{x}{6} + 2 = \frac{6}{2}$, by reducing the right side: $\frac{x}{6} + 2 = 3$. Subtract 2 from both sides, and

multiply both sides by 6 to find that $x = 6$. Solve for y in the second equation, $\frac{y}{3} + 2 = \frac{9}{3}$, by reducing the right

side: $\frac{y}{3} + 2 = 3$. Subtract 2 from both sides, and multiply both sides by 3 to find that $y = 3$. Using 6 for x and 3 for

y, Quantity A becomes $\frac{5}{3}$, and Quantity B becomes $\frac{2}{6} = \frac{1}{3}$.

2. A

Use the equation distance = rate × time. Bob's time is 3 hours, and his rate is 44 miles per hour, so his distance is $3 \times 44 = 132$ miles. Inez's time is 2.5 hours, and her rate is 50 miles per hour, so her distance is $2.5 \times 50 = 125$ miles.

3. B

When a fraction's numerator and denominator are both positive, the fraction is greater than 1 if the numerator is greater than the denominator and less than 1 if the denominator is greater than the numerator. Because y is greater than x, Quantity B is greater than 1, and Quantity A is less than 1. Plugging in numbers makes this apparent. Let

$x = \frac{1}{4}$ and $y = \frac{1}{2}$. $\frac{x}{y} = \frac{\frac{1}{4}}{\frac{1}{2}} = \frac{1}{4} \times \frac{2}{1} = \frac{1}{2}$, and $\frac{y}{x} = \frac{\frac{1}{2}}{\frac{1}{4}} = \frac{1}{2} \times \frac{4}{1} = \frac{4}{2} = 2$. No matter what numbers you try, the

result will be the same.

4. B

Use your calculator. $0.98(8.21)y = 8.0458y$, and $\frac{821y}{98} = 8.37y$. Plug In different values for y, and you'll find that Quantity B is always greater than Quantity A.

5. A

Translate: $\frac{125}{100}k = 80$, so $\frac{1}{8}k = 80$, and $k = 640$. Use this information in the other equation: $k = 640 = \frac{y}{100} \times 80$,

and solve for y: $y = \frac{10}{8} \times 640 = 800$. Quantity A is greater than Quantity B.

6. D

Plug In values for each set. If $P = \{1, 2, 3, 4, 5, 6, 7\}$ and $Q = \{1, 2, 3, 4, 5, 6\}$, the range of Q is smaller. Eliminate choices (B) and (C). If you change P to $\{1, 2, 3, 4, 5, 7, 6\}$, and Q to $\{1, 2, 3, 4, 5, 7\}$, the range of Q is equal to that of P. Eliminate choice (A), and select choice (D).

7. A

One way to attack this problem is to list out F_1 to F_{11}: 10, 13, 16, 19, 22, 25, 28, 31, 34, 37, 40. Notice that F_6 through F_{10} are included in both quantities, so focus on what's different, Quantity A is $F_4 + F_5$ and Quantity B is F_{11}. Quantity A is $19 + 22 = 43$, and Quantity B is 40. Alternatively, you know that F_4 has had 3 changes from F_1. So, $F_4 = F_1 + 3(3) = 10 + 9 = 19$. F_5 has had 4 changes from F_1, so $F_5 = F_1 + 3(4) = 10 + 12 = 22$. F_{11} has had 10 changes from F_1, so $F_{11} = F_1 + 3(10) = 10 + 30 = 40$.

8. C

Plug In a number for n. Let $n = 5$. Because $5 \times 6 = 30$, the product is 30. Add 24 to get 54. Divide by 3 to get 18 as your target. If you Plug In 5 for n in each answer choice, only choice (C) matches the target: $2n + 8 = 2(5) + 8 = 18$.

9. 10

If the average of a and b is 10, then $a + b = 20$. Likewise, if the average of c and d is 7, then $c + d = 14$. If the average of a, b, and c is 8, then $a + b + c = 24$. Because $a + b = 20$, $c = 4$. If $c = 4$, then $d = 10$.

10. C

To find the area of a square, you need the length of a side. To find a side, find the distance between two vertices. If A is at $(3, 7)$ and B is at $(3, 12)$, then length of a side is equivalent to the difference in the y-coordinates: $12 - 7 = 5$. So, side AB has a length of 5. Square this to find the area: $5^2 = 25$.

11. B

Get Dylan's median by putting his weekly sales into increasing order and finding the middle value. Dylan's set is $\{2, 3, 9, 10\}$, and his median is the average of 3 and 9, or 6. Next, do the same thing for Peter's sales numbers. Peter's set is $\{4, 4, 6, 10\}$, so his median the average of 4 and 6, which is 5. The difference between the medians is $6 - 5 = 1$.

12. C

From 1981 through 1984, Program y's ratings were higher than they were in the previous year.

13. E

There were 95 million times 80 percent, or 76 million, television households in 1983. Thirteen percent of them viewed Program y. 76 million times 13 percent (.13) is 9.88 million, or approximately 10.

14. E

You don't know if the number of television-viewing households changes from year to year (though it is likely that it does). Therefore, you can't assume that a 13.2 percent rating in 1981 indicates a smaller number of viewing households than a 14.3 percent rating in 1985. You can't answer this question without information about the number of television households in each year from 1981 to 1985.

15. A

Because order doesn't matter, use the combination formula. To order 3 out of 6 toppings $= \frac{6 \times 5 \times 4}{3 \times 2 \times 1} = 20$.

16. **E**

Because you know the perimeter of the rectangle, you can figure out that both BC and AD = 5. Thus, the area of the rectangle is 3 × 5 = 15. The area of the triangle is therefore also 15. Because the area of a triangle = $\frac{1}{2}bh$, you can put in the values you know to find $15 = \frac{1}{2}(b \times 5)$ and solve for the base, which is 6. LM is the base of the triangle, so $LM = 6$.

17. **A**

Plug In the answer choices, starting with choice (C). If Susan owns 146, Gavin owns 246, and together they own 392. Matt and Angela together would own 784, and the total number of houses would be 1,176. Choice (C) is too large, so also cross off (D) and (E). Try a smaller number. For choice (A), if Susan owns 46, Gavin owns 146, and together they own 192. Matt and Angela together would own 384 and the total number of houses would be 576.

18. $\dfrac{7}{45}$

Plugging In your own number is a great way to tackle this question. Multiply the denominators of $\frac{1}{4}, \frac{1}{5}$, and $\frac{1}{3}$ together to get 60, which will be an easy number with which to work. Make the total number of cars 60. $60 \times \frac{1}{4} = 15$ sports cars, and 60 − 15 = 45 sedans. The number of red cars is $60 \times \frac{1}{5} = 12$. The number of red sports cars is $15 \times \frac{1}{3} = 5$, which means that there are 12 − 5 = 7 red sedans. The fraction of the sedans that are red is $\frac{7}{45}$.

19. **A and B**

Plug In the answer choices. Start with one of the middle values, such as choice (C). If there are 18 grape candies, then there are 40 total candies in the jar. The probability of selecting an orange candy is $\frac{8}{40}$ or 20 percent. The question states that the probability of selecting an orange candy is greater than 20 percent, so choice (C) cannot work. Values larger than 18 also do not work because when the denominator becomes larger than 40, the probability becomes less than 20 percent. The only choices that could work are (A) and (B).

20. **E**

Plug In for k, and let k = 3. CE is a radius and also half of the square's diagonal. If k is 3, then CE is 3, and the diagonal is 6. The diagonal of a square is also the hypotenuse of a 45°-45°-90° triangle. To get the hypotenuse from a side, you multiply by $\sqrt{2}$; so, to get a side from the hypotenuse, divide by $\sqrt{2}$. The sides of the square are each $\frac{6}{\sqrt{2}}$. To find the area, square the side to find $\left(\frac{6}{\sqrt{2}}\right)^2 = \frac{6^2}{\sqrt{2}^2} = \frac{36}{2} = 18$. Plug k = 3 into the answers to find one that yields your target of 18. Choice answer (E) yields the target of 18.

Appendix: Accommodated Testing

If you plan to request accommodations, you need to get a copy of the Request for Nonstandard Testing Accommodations form. You can download it at **www.gre.org** or request it by phone at 609-771-7780 (TTY: 609-771-7714). You can also write to:

GRE Disability Services
P.O. Box 6054
Princeton, NJ
08541-6054

Some of the available accommodations include the following:

- Extended testing time (There are no untimed tests.)
- Additional rest breaks
- Test reader
- Sign language interpreter
- Enlarged font
- Kensington Trackball mouse
- Audio Recording
- Braille

This is not an exhaustive list. You should contact ETS to **learn your full set of options.**

Accommodations are granted for a variety of reasons, but most commonly for **learning disabilities (especially if you have a documented history of learning disabilities) and certain physical disabilities (such as substantial visual impairment).**

Processing a request for accommodations takes time, so you should submit your request as early as possible (at least six weeks before you intend to take the test). The request must include the following:

- A completed CBT Authorization Voucher Request form and the proper test fee
- A completed Nonstandard Testing Accommodations form
- A Certificate of Eligibility if you currently use or have used accommodations at your college, university, or place of employment; have documentation on file that meets the ETS documentation criteria; and are requesting only those accommodations specified in Part III of the Request for Nonstandard Testing Accommodations form
- Documentation of your disability if you do not have a Certificate of Eligibility