

CHAPTER 21: ISEE PRACTICE TEST 2: UPPER- AND MIDDLE-LEVEL

HOW TO TAKE THIS PRACTICE TEST

Before taking this practice test, find a quiet room where you can work uninterrupted for three hours. Make sure you have a comfortable desk and several No. 2 pencils.

Use the answer sheet provided to record your answers. (You can cut it out or photocopy it.)

Once you start this practice test, don't stop until you have finished. Remember—you can review any questions within a section, but you may not go backward or forward a section.

You'll find answer explanations following the test.

Note: There are no major differences between the Middle- and Upper-level ISEE tests, and most of the questions on both tests are appropriate to either the Middle or Upper levels.

The practice test here covers both levels. If you are taking this as a Middle-level test, you may find a few of the questions to be too difficult. Don't worry—just do the best you can, and know that on Test Day, you will see only those questions that are appropriate to your level. Remember, too, that your scores will be based on how you compare to others taking the Middle-level test.

Good luck.

ISEE Practice Test 2: Upper- and Middle-Level Answer Sheet

Remove (or photocopy) the answer sheet and use it to complete the practice test.
Start with number 1 for each section. If a section has fewer questions than answer spaces, leave the extra spaces blank.

SECTION

1

- | | | | | |
|-------------------|--------------------|--------------------|--------------------|--------------------|
| 1 (A) (B) (C) (D) | 9 (A) (B) (C) (D) | 17 (A) (B) (C) (D) | 25 (A) (B) (C) (D) | 33 (A) (B) (C) (D) |
| 2 (A) (B) (C) (D) | 10 (A) (B) (C) (D) | 18 (A) (B) (C) (D) | 26 (A) (B) (C) (D) | 34 (A) (B) (C) (D) |
| 3 (A) (B) (C) (D) | 11 (A) (B) (C) (D) | 19 (A) (B) (C) (D) | 27 (A) (B) (C) (D) | 35 (A) (B) (C) (D) |
| 4 (A) (B) (C) (D) | 12 (A) (B) (C) (D) | 20 (A) (B) (C) (D) | 28 (A) (B) (C) (D) | 36 (A) (B) (C) (D) |
| 5 (A) (B) (C) (D) | 13 (A) (B) (C) (D) | 21 (A) (B) (C) (D) | 29 (A) (B) (C) (D) | 37 (A) (B) (C) (D) |
| 6 (A) (B) (C) (D) | 14 (A) (B) (C) (D) | 22 (A) (B) (C) (D) | 30 (A) (B) (C) (D) | 38 (A) (B) (C) (D) |
| 7 (A) (B) (C) (D) | 15 (A) (B) (C) (D) | 23 (A) (B) (C) (D) | 31 (A) (B) (C) (D) | 39 (A) (B) (C) (D) |
| 8 (A) (B) (C) (D) | 16 (A) (B) (C) (D) | 24 (A) (B) (C) (D) | 32 (A) (B) (C) (D) | 40 (A) (B) (C) (D) |

right in section 1

wrong in section 1

SECTION

2

- | | | | | |
|-------------------|--------------------|--------------------|--------------------|--------------------|
| 1 (A) (B) (C) (D) | 9 (A) (B) (C) (D) | 17 (A) (B) (C) (D) | 25 (A) (B) (C) (D) | 33 (A) (B) (C) (D) |
| 2 (A) (B) (C) (D) | 10 (A) (B) (C) (D) | 18 (A) (B) (C) (D) | 26 (A) (B) (C) (D) | 34 (A) (B) (C) (D) |
| 3 (A) (B) (C) (D) | 11 (A) (B) (C) (D) | 19 (A) (B) (C) (D) | 27 (A) (B) (C) (D) | 35 (A) (B) (C) (D) |
| 4 (A) (B) (C) (D) | 12 (A) (B) (C) (D) | 20 (A) (B) (C) (D) | 28 (A) (B) (C) (D) | 36 (A) (B) (C) (D) |
| 5 (A) (B) (C) (D) | 13 (A) (B) (C) (D) | 21 (A) (B) (C) (D) | 29 (A) (B) (C) (D) | 37 (A) (B) (C) (D) |
| 6 (A) (B) (C) (D) | 14 (A) (B) (C) (D) | 22 (A) (B) (C) (D) | 30 (A) (B) (C) (D) | 38 (A) (B) (C) (D) |
| 7 (A) (B) (C) (D) | 15 (A) (B) (C) (D) | 23 (A) (B) (C) (D) | 31 (A) (B) (C) (D) | 39 (A) (B) (C) (D) |
| 8 (A) (B) (C) (D) | 16 (A) (B) (C) (D) | 24 (A) (B) (C) (D) | 32 (A) (B) (C) (D) | 40 (A) (B) (C) (D) |

right in section 2

wrong in section 2

SECTION

3

- | | | | | |
|-------------------|--------------------|--------------------|--------------------|--------------------|
| 1 (A) (B) (C) (D) | 9 (A) (B) (C) (D) | 17 (A) (B) (C) (D) | 25 (A) (B) (C) (D) | 33 (A) (B) (C) (D) |
| 2 (A) (B) (C) (D) | 10 (A) (B) (C) (D) | 18 (A) (B) (C) (D) | 26 (A) (B) (C) (D) | 34 (A) (B) (C) (D) |
| 3 (A) (B) (C) (D) | 11 (A) (B) (C) (D) | 19 (A) (B) (C) (D) | 27 (A) (B) (C) (D) | 35 (A) (B) (C) (D) |
| 4 (A) (B) (C) (D) | 12 (A) (B) (C) (D) | 20 (A) (B) (C) (D) | 28 (A) (B) (C) (D) | 36 (A) (B) (C) (D) |
| 5 (A) (B) (C) (D) | 13 (A) (B) (C) (D) | 21 (A) (B) (C) (D) | 29 (A) (B) (C) (D) | 37 (A) (B) (C) (D) |
| 6 (A) (B) (C) (D) | 14 (A) (B) (C) (D) | 22 (A) (B) (C) (D) | 30 (A) (B) (C) (D) | 38 (A) (B) (C) (D) |
| 7 (A) (B) (C) (D) | 15 (A) (B) (C) (D) | 23 (A) (B) (C) (D) | 31 (A) (B) (C) (D) | 39 (A) (B) (C) (D) |
| 8 (A) (B) (C) (D) | 16 (A) (B) (C) (D) | 24 (A) (B) (C) (D) | 32 (A) (B) (C) (D) | 40 (A) (B) (C) (D) |

right in section 3

wrong in section 3

SECTION

4

- | | | | | |
|--------------------|--------------------|--------------------|--------------------|--------------------|
| 1 (A) (B) (C) (D) | 11 (A) (B) (C) (D) | 21 (A) (B) (C) (D) | 31 (A) (B) (C) (D) | 41 (A) (B) (C) (D) |
| 2 (A) (B) (C) (D) | 12 (A) (B) (C) (D) | 22 (A) (B) (C) (D) | 32 (A) (B) (C) (D) | 42 (A) (B) (C) (D) |
| 3 (A) (B) (C) (D) | 13 (A) (B) (C) (D) | 23 (A) (B) (C) (D) | 33 (A) (B) (C) (D) | 43 (A) (B) (C) (D) |
| 4 (A) (B) (C) (D) | 14 (A) (B) (C) (D) | 24 (A) (B) (C) (D) | 34 (A) (B) (C) (D) | 44 (A) (B) (C) (D) |
| 5 (A) (B) (C) (D) | 15 (A) (B) (C) (D) | 25 (A) (B) (C) (D) | 35 (A) (B) (C) (D) | 45 (A) (B) (C) (D) |
| 6 (A) (B) (C) (D) | 16 (A) (B) (C) (D) | 26 (A) (B) (C) (D) | 36 (A) (B) (C) (D) | 46 (A) (B) (C) (D) |
| 7 (A) (B) (C) (D) | 17 (A) (B) (C) (D) | 27 (A) (B) (C) (D) | 37 (A) (B) (C) (D) | 47 (A) (B) (C) (D) |
| 8 (A) (B) (C) (D) | 18 (A) (B) (C) (D) | 28 (A) (B) (C) (D) | 38 (A) (B) (C) (D) | 48 (A) (B) (C) (D) |
| 9 (A) (B) (C) (D) | 19 (A) (B) (C) (D) | 29 (A) (B) (C) (D) | 39 (A) (B) (C) (D) | 49 (A) (B) (C) (D) |
| 10 (A) (B) (C) (D) | 20 (A) (B) (C) (D) | 30 (A) (B) (C) (D) | 40 (A) (B) (C) (D) | 50 (A) (B) (C) (D) |

right in section 4

wrong in section 4

SECTION 1

Time—20 Minutes

40 Questions

This section consists of two different types of questions. There are directions for each type.

Each of the following questions consists of one word followed by four words or phrases. Select the one word or phrase whose meaning is closest to the word in capital letters.

1. DESECRATE:

- (A) defend
- (B) deny
- (C) describe
- (D) defile

2. LAUD:

- (A) touch
- (B) praise
- (C) insult
- (D) hear

3. AVERT:

- (A) vindicate
- (B) prevent
- (C) explain
- (D) dislike

4. PIETY:

- (A) rarity
- (B) smell
- (C) faith
- (D) meal

5. AMORAL:

- (A) unethical
- (B) lovable
- (C) transparent
- (D) imaginary

6. CANDOR:

- (A) odor
- (B) honesty
- (C) ability
- (D) wealth

7. HAUGHTINESS:

- (A) heat
- (B) height
- (C) rudeness
- (D) arrogance

8. VERIFY:

- (A) complete
- (B) prove
- (C) violate
- (D) consume

9. DECEIVE:

- (A) trick
- (B) empty
- (C) dye
- (D) view

10. FICTION:

- (A) presumption
- (B) growth
- (C) falsehood
- (D) wound

11. HARDY:

- (A) healthy
- (B) mysterious
- (C) firm
- (D) obese

12. LYRICAL:

- (A) mythical
- (B) bright
- (C) musical
- (D) wet

13. METAMORPHOSIS:

- (A) change
- (B) compliment
- (C) rejection
- (D) meeting

14. LAMENT:

- (A) support
- (B) decline
- (C) solidify
- (D) grieve

15. ARID:

- (A) light
- (B) clean
- (C) worried
- (D) dry

16. PERCEPTIVE:

- (A) confused
- (B) round
- (C) observant
- (D) imbued

17. ADAMANT:

- (A) thin
- (B) enlarged
- (C) admiring
- (D) stubborn

18. NEUTRAL:

- (A) inventive
- (B) foreign
- (C) unbiased
- (D) detailed

19. DOCILE:

- (A) old
- (B) tame
- (C) active
- (D) rare

20. WARINESS:

- (A) extremity
- (B) caution
- (C) superiority
- (D) mobility

Directions: Select the word(s) that best fits the meaning of each sentence.

21. Raccoons are ____ : they come out at night to look for food and sleep during the day.

- (A) nocturnal
- (B) friendly
- (C) precocious
- (D) monolithic

22. Normally _____, Jenny lacked her usual _____ when I called her and invited her to a movie.
(A) absurd .. severity
(B) scornful .. predilection
(C) amiable .. enthusiasm
(D) distraught .. cheeriness
23. The soap opera regularly dwells on the _____ aspects of life; just last week two characters died.
(A) morbid
(B) presumptuous
(C) exciting
(D) expensive
24. Once a(n) _____ gathering, the Greek festival has, in recent times, become highly _____.
(A) urban .. contemporary
(B) religious .. commercialized
(C) mournful .. gloomy
(D) parallel .. transformed
25. The candidate changed his positions on so many issues that people began to think he was _____.
(A) reliable
(B) dependent
(C) aloof
(D) flighty
26. Melanie danced with such _____, that no one could _____ her talent any longer.
(A) speed.. ascertain
(B) grace .. affirm
(C) agility .. question
(D) melancholy .. deny
27. Sandy showed genuine _____ when she was caught: she cried and promised never to hurt anyone again.
(A) remorse
(B) melodrama
(C) wit
(D) enthusiasm
28. The _____ journey _____ us all; even my dog sat down to take a rest.
(A) panoramic .. exhausted
(B) tortuous .. invigorated
(C) strenuous .. fatigued
(D) arduous .. rejuvenated
29. Relying on every conceivable gimmick and stereotype, the latest Hollywood movie is not only _____ but _____.
(A) dull .. ambivalent
(B) predictable .. absurd
(C) complete .. erudite
(D) boring .. enlightening
30. Lara not only respected her grandfather, she _____ him.
(A) feared
(B) retired
(C) resembled
(D) revered
31. That Chinese pieces of silk dating over 1,500 years old have been found in Egypt is _____ since the landscape between these two countries includes arid deserts and several _____ mountain ranges.
(A) known .. required
(B) impressive .. reduced
(C) predictable .. steep
(D) incredible .. massive

32. At first the empty house seemed frightening with all its cobwebs and creaking shutters, but we soon realized that it was quite ____.
- (A) benign
(B) deceptive
(C) affluent
(D) obliterated
33. Once a ____ propagated only by science fiction movies, the possibility of life on Mars has recently become more ____.
- (A) wish .. doubtful
(B) myth .. plausible
(C) story .. impossible
(D) hypothesis .. empty
34. Many writers of the 20th century were influenced by Hemingway's ____ writing style and consequently discontinued the ____ language characteristic of the 19th century novel.
- (A) sparse .. verbose
(B) dull .. insipid
(C) peaceful .. descriptive
(D) complete .. florid
35. Dave never failed to charm listeners with his ____ stories.
- (A) lethargic
(B) wan
(C) insufferable
(D) engaging
36. Screaming and laughing, the students were ____ by their ____ experience on the white-water raft.
- (A) amused .. tepid
(B) irritated .. continued
(C) exhilarated .. first
(D) frightened .. secure
37. Highly influenced by Frank Lloyd Wright's principles of design, the architect E. Fay Jones has built homes reputed to equal—and even ____—Wright's successes at building in harmony with natural surroundings.
- (A) echo
(B) question
(C) reconstruct
(D) surpass
38. Weighing more than 70 tons, brachiosaurus was a(n) ____ creature, yet its brain was quite ____.
- (A) intelligent .. enormous
(B) gargantuan .. small
(C) minute .. tiny
(D) prodigious .. extant
39. Trumpets, including Pacific conch-shell trumpets, African ivory trumpets, orchestral valve trumpets, and tubas, comprise one of the most ____ categories of wind instruments.
- (A) excessive
(B) discordant
(C) coherent
(D) diverse
40. The ____ nature of the platypus makes it difficult to spot, even in the ____ space of a zoological exhibit.
- (A) elusive .. confined
(B) crafty .. massive
(C) playful .. structured
(D) slothful .. open

SECTION 2

Time—35 Minutes

37 Questions

In this section there are four possible answers after each question. Choose which one is best. You may use the blank space at the right of the page for scratch work.

Note: Figures are drawn with the greatest possible accuracy, UNLESS stated “Not Drawn to Scale.”

1. If $Q + 7 - 8 + 3 = 23$, what is the value of Q ?

USE THIS SPACE FOR FIGURING.

- (A) 19
- (B) 20
- (C) 21
- (D) 22

2. A kilogram is equal to how many grams?

- (A) -1,000
- (B) -100
- (C) 100
- (D) 1,000

3. What is the value of $\frac{1}{9} + \frac{7}{12} + \frac{5}{6}$?

- (A) $\frac{9}{13}$
- (B) $1\frac{19}{36}$
- (C) $1\frac{2}{3}$
- (D) 2

4. What is 15% of 60?

- (A) 6
- (B) 9
- (C) 12
- (D) 15

USE THIS SPACE FOR FIGURING.

5. If $a + 2 > 5$ and $a - 4 < 1$, which of the following is a possible value for a ?
- (A) 2
(B) 3
(C) 4
(D) 5
6. If $2x + 4 = 26$, then $x + 4 =$
- (A) 9
(B) 11
(C) 13
(D) 15
7. If the perimeter of an equilateral hexagon is 42, what is the sum of the lengths of 2 sides?
- (A) 6
(B) 7
(C) 12
(D) 14
8. If Angelo earns \$2,000 per month and spends 30% of his monthly earnings on rent, how much does he pay for rent each month?
- (A) \$510
(B) \$600
(C) \$610
(D) \$680
9. A farmer pays \$58 for 6 new chickens. How many eggs must the farmer sell at 16 cents apiece in order to pay for the chickens?
- (A) 360
(B) 361
(C) 362
(D) 363

10. A certain moped needs 12 gallons of fuel to go 48 miles. At this rate, how many gallons of fuel are needed to go 60 miles?

(A) 4
(B) 5
(C) 15
(D) 24

USE THIS SPACE FOR FIGURING.

11. $1\frac{6}{11} + 1\frac{7}{22} =$

(A) $2\frac{13}{33}$
(B) $2\frac{19}{22}$
(C) $2\frac{10}{11}$
(D) $2\frac{21}{22}$

12. If the average of 6 numbers is 9, what is the sum of those numbers?

(A) 15
(B) 30
(C) 54
(D) 96

13. If $\frac{1}{2} > x > 0$ and $\frac{1}{3} > x > \frac{1}{10}$, which of the following is a possible value for x ?

(A) $\frac{2}{3}$
(B) 0.47
(C) $\frac{1}{5}$
(D) $\frac{1}{20}$

14. If $3a + 6a = 36$, what is the value of a ?

(A) 1
(B) 2
(C) 3
(D) 4

15. What is $\frac{1}{4}$ of 0.72?

(A) 0.018
(B) 0.18
(C) 1.8
(D) 18

16. In Figure 1, what is the total area?

(A) 10
(B) 24
(C) 28
(D) 45

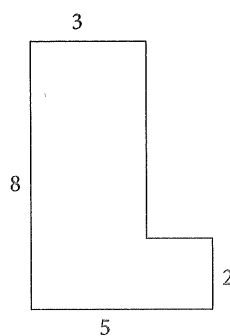


Figure 1

17. How many different prime factors are there of 48?

(A) 1
(B) 2
(C) 3
(D) 4

18. Which of the following is a factor of 36 but not of 48?

(A) 3
(B) 6
(C) 12
(D) 18

19. If Figure 2 is a cube, what is its volume?

(A) 125
(B) 100
(C) 50
(D) 25

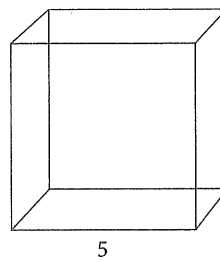


Figure 2

20. While studying for a history test, it took Jake 1 hour 15 minutes to review the first 30 pages. If he continues to study at the same pace, how long will it take him to review the remaining 70 pages?

(A) 2 hours 30 minutes
(B) 2 hours 37 minutes
(C) 2 hours 45 minutes
(D) 2 hours 55 minutes

USE THIS SPACE FOR FIGURING.

21. Mary types 12 words every 20 seconds. At this rate, how many words does she type every 2 minutes?

(A) 18
(B) 36
(C) 42
(D) 72

22. If $r = 8$, then $(r + 4)^2 =$

(A) 24
(B) 64
(C) 80
(D) 144

Directions: In questions 23–35, note the given information, if any, and then compare the quantity in Column A to the quantity in Column B. Next to the number of each question write

A if the quantity in Column A is greater

B if the quantity in Column B is greater

C if the two quantities are equal

D if the relationship cannot be determined from the information given

Column A

Column B

USE THIS SPACE FOR FIGURING.

23. $\frac{1}{2} + \frac{3}{4} + \frac{7}{8}$ $\frac{2}{5} + \frac{3}{4} + \frac{7}{9}$

24. $\frac{4}{5} \times \frac{15}{45} \times \frac{3}{16}$ 0.05

25. $\frac{4}{9} \times \frac{18}{6} \times \frac{12}{20}$ $\frac{5}{4}$

$3x - 12 = 3x - 6x$

26. $x + 2$ 2

$x > 0$

$y > 0$

27. $x + 1$ y

28. 5% of $(3 + 4)$ 4% of (3×4)

29. 0.46 $\frac{9}{20}$

30.

The number of
32-cent stamps
that can be
purchased
with \$5

The number of
29-cent stamps
that can be
purchased
with \$5

$$\frac{8}{9} > x > \frac{1}{2}$$

31.

x

$\frac{2}{3}$

$$x < 0$$

32.

$2x$

$(2x)(1x)$

33.

Perimeter of an
octagon with sides
of equal length

8

34.

The number of
prime factors of 21

3

$$\frac{5}{7} \text{ of } x \text{ is } 35.$$

35.

x

48

36.

98% of 51

51% of 98

37.

20% of \$42

\$9

USE THIS SPACE FOR FIGURING.

SECTION 3

Time—35 Minutes
36 Questions

Read each passage carefully and then answer the questions about it. For each question, decide on the basis of the passage which one of the choices best answers the question.

- The heyday of the log cabin occurred between 1780 and 1850, when a great number of settlers forged westward. While early cabins were primitive, with dirt floors and sod roofs, later settlers built fine, two-story, log-hewn farmhouses with rooms for entertaining. By the 1840s, though, the log cabin began fading out. Factors contributing to its decline included sawmills, nails, and the rising popularity of the Greek Revival-style house, with its democratic roots in ancient Greece and its temple front facing the street. Trains brought hardware, manufactured goods, and an end to geographic isolation. Climate and the proximity of the local forest no longer set architectural limits. In hundreds of towns, log homes were gradually sheathed with clapboard or brick or, in many instances, were simply burned. Logs continued to house livestock, but after the 1850s, fewer and fewer people.
- Line (5) (10) (15)
- The passage suggests that the origins of the Greek Revival style
 - arose out of a general desire to replace log cabins
 - widely influenced contemporary Greek architects
 - were popular with devoutly religious Americans
 - appealed to democratic-minded Americans
 - As used in line 3, the word “forged” means
 - fled
 - wandered
 - moved
 - returned
 - It can be inferred from the passage that, unlike Greek Revival homes, log cabins
 - did not always face the street
 - lacked indoor plumbing
 - could not have glass windows
 - were built near lakes and rivers
 - It can be inferred from the passage that a limiting factor in the construction of a settler’s log cabin was often
 - the availability of nails
 - the location of the nearest forest
 - the opinions of other settlers
 - the laws of the local government
 - According to the passage, most log structures after 1850 were built
 - in wilderness areas
 - in frontier towns
 - as railroad depots
 - to shelter animals

6. Which of the following questions is NOT answered in the passage?
- (A) In their heyday, were log cabins common in the West?
 - (B) When did log cabins finally disappear?
 - (C) Why was the Greek Revival-style house popular?
 - (D) How did log cabins in the 1780s differ from log cabins in the 1840s?

The plague, or Black Death, struck Europe in a series of outbreaks in the 13th and 14th centuries, killing an estimated one-third of the continent's population. The epidemic wrought enormous changes in European society, some of which, ironically, were beneficial. Reform in the medical profession, which had mostly failed to relieve the suffering, was one of the most immediate benefits. A great many doctors died or simply ran away during the plague. By the 1300s, many universities were lacking professors of medicine and surgery. Into this void rushed people with new ideas. In addition, ordinary people began acquiring medical guides and taking command of their own health. Gradually, more medical texts began to appear in everyday languages rather than in Latin, making medical knowledge more accessible.

7. The passage focuses primarily on
- (A) the enormous loss of life caused by the plague
 - (B) the lack of qualified doctors during the plague
 - (C) one positive result of a catastrophic event
 - (D) the translation of medical texts into everyday language

8. As used in line 4, the word "wrought" means
- (A) caused
 - (B) needed
 - (C) accelerated
 - (D) offered
9. The passage suggests that, prior to the plague outbreaks, European medicine was
- (A) hampered by a shortage of doctors
 - (B) available only to university students
 - (C) in need of sweeping changes
 - (D) practiced mainly in Latin-speaking countries
10. It can be inferred from the passage that after the 1300s, medical texts
- (A) included information on how to cure the plague
 - (B) were more easily available to the general population
 - (C) were no longer written in Latin
 - (D) were not written by university professors
11. Which of the following best describes the tone of the article?
- (A) Mournful
 - (B) Sarcastic
 - (C) Favorable
 - (D) Sensible
12. All of the following are outcomes of the plague EXCEPT
- (A) medical information was made more accessible to people
 - (B) people started learning Latin to understand the medical texts
 - (C) people with new ideas on medicine started teaching medicine and surgery
 - (D) a lot of people died from the plague

In the sport of orienteering, competitors use a map and compass to navigate their way cross-country along an unfamiliar course. The novice quickly finds, however, that the most important question in orienteering is not compass bearing but choice of route. There are almost always several different ways to get from one point to another, and the beeline on a direct compass bearing over a mountain is seldom the best. Indeed, orienteers tend to disdain beelining over obstacles as a crude approach; they aspire to intellectual finesse. If climbing 20 feet in elevation requires the time and energy it would take to travel 250 feet on level ground—the sort of quick calculation orienteers are always making—then it may be better to follow a prominent contour along one flank of the mountain or even to stick to the safety of a trail looping around the base.

- Line (5) quickly finds, however, that the most important question in orienteering is not compass bearing but choice of route. There are almost always several different ways to get from one point to another, and the beeline on a direct compass bearing over a mountain is seldom the best.
- (10) Indeed, orienteers tend to disdain beelining over obstacles as a crude approach; they aspire to intellectual finesse. If climbing 20 feet in elevation requires the time and energy it would take to travel 250 feet on level ground—the sort of quick calculation orienteers are always making—then it may be better to follow a prominent contour along one flank of the mountain or even to stick to the safety of a trail looping around the base.
13. The passage suggests that a hiker with a map and compass is NOT orienteering if she
- (A) climbs more than one mountain per route
 - (B) travels over a known, familiar route
 - (C) takes more than one route per day
 - (D) follows a direct path over an obstacle
14. According to the passage, an orienteer places greatest importance on
- (A) maintaining a single compass bearing
 - (B) avoiding hazardous terrain
 - (C) overcoming obstacles as fast as possible
 - (D) choosing the best route available
15. It can be inferred from the passage that most orienteers would consider a competitor who climbs a mountain in order to take the most direct route to be
- (A) gaining a major advantage
 - (B) lacking sophistication
 - (C) breaking the rules
 - (D) endangering other competitors
16. The passage suggests that one skill orienteers require is the ability to
- (A) run while carrying a backpack
 - (B) swim long distances
 - (C) set up a campsite
 - (D) make rapid calculations
17. As used in line 12, “finesse” means
- (A) skill
 - (B) movement
 - (C) inefficiency
 - (D) devotion
18. Which of the following best describes the author’s attitude toward the subject?
- (A) Respect
 - (B) Disdain
 - (C) Indifference
 - (D) Appreciation

Researchers have identified two phenomena that in previous literature were confounded under the category of nightmares. On the one hand, there is the true nightmare, which is an actual, detailed dream. On the other there is the “night terror,” from which the sleeper, often a child, suddenly awakes in great fright with no memory of a dream, often screaming and sometimes going off in a sleepwalking trance. Night terrors are seldom of serious consequence, no matter how horrifying they may appear to anxious parents. Outside of taking commonsense precautions—such as making sure a sleepwalker does not go to bed near an open window or on a balcony—there is nothing much to do about them. A child’s night terrors can be reduced somewhat with a consistent sleep schedule and by avoiding excessive fatigue. Excessive concern or medication should usually be avoided.

19. As used in line 2, the word “confounded” means
- (A) entitled
 - (B) confused
 - (C) written
 - (D) underappreciated
20. The passage suggests that, until recently, sleep researchers
- (A) knew very little about the nature of dreams
 - (B) studied only adult sleeping habits, not those of children
 - (C) did not differentiate between nightmares and night terrors
 - (D) prescribed medication for children suffering from night terrors
21. According to the passage, a nightmare is a
- (A) full-fledged dream
 - (B) dream fragment
 - (C) hallucination
 - (D) trancelike state
22. The passage implies that parents of children who experience night terrors
- (A) tend to dismiss them as inconsequential
 - (B) also suffered night terrors when they were children
 - (C) find their occurrence nearly as frightening as the children themselves do
 - (D) should consult a doctor as soon as possible
23. Which of the following questions is NOT answered in the passage?
- (A) What is the difference between nightmares and night terrors?
 - (B) What are some precautions parents can take to ensure the safety of children who experience night terrors?
 - (C) Does a child who is frightened upon waking from a night terror remember dreaming?
 - (D) Why does a consistent sleep schedule reduce the incidence of night terrors?
24. According to the passage, how are night terrors different from nightmares?
- (A) One is remembered by the sleeper, and the other is not.
 - (B) One happens when the person is asleep, and the other does not.
 - (C) One will bring harm to the sleeper, and the other will not.
 - (D) One requires hospitalization, while the other does not.

The Neanderthal was an early human that flourished throughout Europe and western Asia between 35,000 and 85,000 years ago. Physically,

Line Neanderthals differed from modern humans in
(5) many important ways. They had massive limb bones, a barrel chest, thick brow ridges, a receding forehead, and a bunlike bulge on the back of the skull. Yet despite Neanderthals' reputation for low intelligence, there is nothing that clearly
(10) distinguishes a Neanderthal's brain from that of modern humans—except for the fact that, on average, Neanderthal versions were slightly larger. Combining enormous physical strength with manifest intelligence, Neanderthals appeared to
(15) be supremely well adapted. Nevertheless, around 35,000 years ago, they vanished from the face of the earth. The question of what became of the Neanderthals still baffles paleontologists and is perhaps the most talked-about issue in human
(20) origins research today.

25. It can be inferred from the passage that most Neanderthals probably had

- (A) big arms
- (B) wide-set eyes
- (C) bowed legs
- (D) narrow feet

26. According to the passage, Neanderthals lived

- (A) in caves and mud dwellings
- (B) by hunting in packs
- (C) in Europe and Asia
- (D) on all the continents

27. Based on information in the passage, modern humans, when compared with Neanderthals, probably have

- (A) superior eyesight
- (B) a better sense of smell
- (C) less physical strength
- (D) more body hair

28. The passage suggests that modern humans tend to think of Neanderthals as

- (A) peaceful
- (B) skilled artists
- (C) farmers
- (D) unintelligent

29. According to the passage, one question paleontologists are still trying to solve is

- (A) what constituted the basic Neanderthal diet
- (B) what were the Neanderthals' migratory patterns
- (C) why the Neanderthal species became extinct
- (D) where the Neanderthals originally came from

30. Where would this passage most likely be found?

- (A) A short story about cavemen
- (B) A research paper on early humans
- (C) A letter from an explorer's encounter with a Neanderthal
- (D) A textbook in health class

- Coyotes are one of the most primitive of living dogs. According to the fossil record, a close relative of the contemporary coyote existed here two to three million years ago. It in turn seems to have descended from a group of small canids that was widely dispersed throughout the world and that also gave rise to the jackals of Eurasia and Africa. One to two million years ago, a division occurred in North America between the coyote and the wolf. Time passed, and glaciers advanced and receded. Mammoths, saber-toothed tigers, and dire wolves (canids with enormous heads) came and went. Native horses left the continent over land bridges, and others returned on galleons. Through it all, coyotes remained basically the same—primitive in evolutionary terms but marvelously flexible, always progressive and innovative—riding out, adjusting to and exploiting the changes.
31. The primary focus of the passage is on
- (A) the ability of the coyote species to survive unchanged
 - (B) the unfortunate extinction of many prehistoric life forms
 - (C) the changing nature of animal life in prehistoric times
 - (D) the evolutionary division between coyotes and wolves
32. The passage suggests that modern dogs are
- (A) direct descendants of dire wolves
 - (B) native to North America but not to Eurasia
 - (C) genetically related to coyotes
 - (D) lacking in evolutionary flexibility
33. According to the passage, a close relative of the coyote existed in North America
- (A) ten million years ago
 - (B) seven million years ago
 - (C) five million years ago
 - (D) two million years ago
34. The author probably mentions mammoths and saber-toothed tigers in order to give examples of
- (A) the coyote's more distant relatives
 - (B) animals that did not leave North America by land bridge
 - (C) species that the jackal hunted into extinction
 - (D) species that failed to adapt as the coyote did
35. When the passage states that "others returned on galleons" (line 14), it most probably means that
- (A) some species of horse became extinct, then others appeared
 - (B) horses were reintroduced to North America when Europeans brought them by ship
 - (C) some coyotes were introduced into Africa and Eurasia
 - (D) prehistoric horses and dire wolves became extinct at roughly the same time
36. All the following are true EXCEPT
- (A) mammoths and dire wolves no longer exist
 - (B) horses were in North America before the Europeans brought them here
 - (C) coyotes are related to wolves
 - (D) coyotes are not good at adapting to change

SECTION 4

Time—40 Minutes

47 Questions

In this section there are four possible answers after each question. Choose which one is best. You may use the blank space at the right of the page for scratch work.

Note: Figures are drawn with the greatest possible accuracy, UNLESS stated "Not Drawn to Scale."

1. What are all the values of x for which

$$(x - 2)(x + 5) = 0?$$

(A) -5

(B) -2

(C) 2 and -5

(D) -2 and -5

USE THIS SPACE FOR FIGURING.

2. Patty uses 2 gallons of paint to cover 875 square feet of surface. At this rate, how many gallons will she need to cover 4,375 square feet of surface?

(A) 4

(B) 5

(C) 8

(D) 10

3. What is the area of a triangle with a base of 4 inches and a height of 6 inches?

(A) 10

(B) 12

(C) 20

(D) 24

4. An equilateral triangle has sides of lengths $3x + 1$ and $x + 7$. What is the length of one side?

(A) 3

(B) 5

(C) 8

(D) 10

5. $(65 \times 10^2) + (31 \times 10^3) + 12 =$

- (A) 375,120
- (B) 37,512
- (C) 3,751.20
- (D) 375.12

USE THIS SPACE FOR FIGURING.

6. Mr. Richman purchased a boat for \$120,000. If the boat loses 20% of its value when placed in the water, how much did Mr. Richman lose in the value of his boat on its first use?

- (A) \$2,400
- (B) \$9,600
- (C) \$24,000
- (D) \$96,000

7. A dog is chained by a flexible leash to a stake in the ground in the center of his yard. If the leash is 8 meters long, what is the area in square meters in which he is able to run?

- (A) 8
- (B) 16
- (C) 8π
- (D) 64π

8. If Megan needs to drive 328 miles in 4 hours, at what rate of speed must she drive?

- (A) 92 miles per hour
- (B) 82 miles per hour
- (C) 72 miles per hour
- (D) 67 miles per hour

USE THIS SPACE FOR FIGURING.

9. If a jet travels at a constant rate of 270 miles per hour, approximately how many hours will it take to reach its destination 3,300 miles away?

(A) 23.68
(B) 18.91
(C) 15.38
(D) 12.22

10. If $a = 3$ and $b = 4$, what is the value of $a^2 + 2ab + b^2$?

(A) 14
(B) 24
(C) 49
(D) 144

11. If $x - y = 5$ and $4x + 6y = 20$, then $x + y =$

(A) 3
(B) 4
(C) 5
(D) 6

12. How many distinct prime factors are there of 726?

(A) 2
(B) 3
(C) 4
(D) 5

13. If n is an odd number, which of the following MUST be even?

(A) $-2n - 1$
(B) $2n + 1$
(C) $2n - 1$
(D) $4n$

14. If Jamie is in school for 6 hours per day, 5 days per week, how many seconds does Jamie spend in school in one week?

(A) 1,108,000
(B) 180,000
(C) 108,000
(D) 18,000

USE THIS SPACE FOR FIGURING.

15. If it is snowing at a rate of 3.5 inches per hour and the storm is expected to continue at the same rate for the next 4 days, how many inches of snow accumulation can be expected?

(A) 84
(B) 168
(C) 226
(D) 336

16. Nicholas is x years old, and Billy is three times as old as Nicholas. What was the sum of their ages, in years, 5 years ago?

(A) $x - 5$
(B) $2x + 2$
(C) $3x - 10$
(D) $4x - 10$

17. In a certain class, there are twice as many boys as girls. If the total number of students in the class is 36, how many boys are there?

(A) 24
(B) 18
(C) 12
(D) 9

18. At a party, $\frac{1}{3}$ of the guests drank only soda, and $\frac{2}{5}$ of the guests drank only juice. If the remaining 16 guests had nothing to drink, then how many guests were at the party?

(A) 60
(B) 50
(C) 45
(D) 30

USE THIS SPACE FOR FIGURING.

19. If x and y are consecutive integers such that $xy = 6$ and y is greater than x , which of the following statements MUST be true?

I. $x + y = 5$
II. x is less than 6
III. $\frac{x}{y} = \frac{2}{3}$

(A) I only
(B) II only
(C) I and II only
(D) I and III only

20. Jenny has y baseball cards. She gives 5 cards to each of three different friends and in return receives 2 cards from each friend. How many cards does Jenny have after the exchange?

(A) $y - 9$
(B) $y - 5$
(C) $y + 3$
(D) $y + 5$

21. If two fair coins are tossed simultaneously, what is the probability that two tails are thrown?

(A) 1
(B) $\frac{1}{2}$
(C) $\frac{1}{4}$
(D) $\frac{1}{8}$

USE THIS SPACE FOR FIGURING.

22. A photocopier makes copies at a constant rate of 15 copies per minute. A certain copy job requires 600 copies. What fraction of the job will the machine finish in 5 minutes?

(A) $\frac{1}{200}$
(B) $\frac{1}{40}$
(C) $\frac{1}{8}$
(D) $\frac{1}{5}$

23. Which of the following is a possible value of z if $2(z - 3) > 6$ and $z + 4 < 15$?

(A) 3
(B) 6
(C) 7
(D) 11

24. In a certain library there are 3 fiction books for every 8 nonfiction books. If the library has 600 nonfiction books, how many books does it have?

(A) 2,200
(B) 1,400
(C) 825
(D) 800

25. If $x + y$ equals an odd number and $x + z$ equals an even number, each of the following could be true EXCEPT

(A) x is even and y is odd
(B) y is even and z is odd
(C) x and z are even and y is odd
(D) x and y are even and z is odd

USE THIS SPACE FOR FIGURING.

26. On the first test, Ted scored 7 percentage points above the passing grade. On the second test he scored 12 percentage points lower than he did on his first test. His score on the second test was

(A) 19 percentage points below the passing grade
(B) 12 percentage points below the passing grade
(C) 5 percentage points below the passing grade
(D) 2 percentage points above the passing grade

27. In a class, 70 percent of the students are right-handed, and the rest are left-handed. If 70 percent of the left-handed students have brown eyes, then left-handed students with brown eyes make up what percent of the entire class?

(A) 14%
(B) 21%
(C) 30%
(D) 49%

Questions 28 and 29 refer to the following definition:
For all real numbers q and r , let $q//r = (qr) - (q - r)$.

28. $8//2 =$

(A) 6
(B) 8
(C) 10
(D) 16

29. If $P/3 = 11$, then $P =$

(A) 3
(B) 4
(C) 6
(D) 7

USE THIS SPACE FOR FIGURING.

30. If the product of integers a and b is 16 and a is greater than 4, then which of the following MUST be true?

I. $b = 2$
II. The sum of a and b is greater than zero
III. a is greater than b

(A) II only
(B) III only
(C) I and II only
(D) II and III only

31. In Figure 1, what is the value of x ?

(A) 20
(B) 30
(C) 45
(D) 90

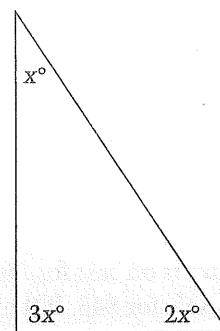


Figure 1

32. In Figure 2, the distance from B to C is twice the distance from A to B , and the distance from C to D is equal to half the distance from A to C . If the distance from B to C is 12, what is the distance from A to D ?

(A) 18
(B) 24
(C) 27
(D) 32

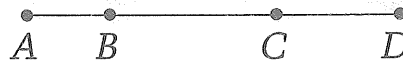


Figure 2

33. What is the greatest number of squares with sides of 2 centimeters that can be cut from a square with an area of 36 square centimeters?

(A) 4
(B) 9
(C) 18
(D) 36

USE THIS SPACE FOR FIGURING.

34. If $x = 4y + 3$, then what does $x - 5$ equal?

(A) $4y - 8$
(B) $4y - 2$
(C) $4y + 5$
(D) $5y - 8$

35. A grocer buys oranges at a price of 4 for \$1 and then sells them in his store for 40 cents each. How many oranges must he sell to earn a profit of \$3?

(A) 2
(B) 10
(C) 15
(D) 20

36. A wool sweater is on sale for \$63, and a cotton sweater is on sale for \$45. If the sale price for each sweater is 10% less than the original price, how much less did the cotton sweater cost than the wool sweater before either went on sale?

(A) \$23.50
(B) \$20
(C) \$19.80
(D) \$18

USE THIS SPACE FOR FIGURING.

37. John finished $\frac{1}{3}$ of his homework assignment between 6:00 P.M. and 7:30 P.M. He needs to finish the assignment by 11:00 P.M. If he works at the same rate, what is the latest time that he can return to his homework?
- (A) 7:45 P.M.
(B) 8:00 P.M.
(C) 8:30 P.M.
(D) 9:30 P.M.
38. There are twice as many men as women on a track team. Medals were given to $\frac{1}{3}$ of the women. If there are 45 men and women on the team, how many women received medals?
- (A) 5
(B) 6
(C) 10
(D) 11
39. If m is greater than n , and n is greater than 4, which of the following is LEAST?
- (A) $\frac{1}{4m}$
(B) $\frac{1}{4n}$
(C) $\frac{1}{4 + m}$
(D) $\frac{1}{4 + n}$

USE THIS SPACE FOR FIGURING.

40. If $\frac{1}{5}$ of a number is less than 20, the number must be
- (A) less than 4
 - (B) equal to 4
 - (C) greater than 4
 - (D) less than 100
41. A six-story apartment building has x apartments on each of its lower 3 floors and y apartments on each of its upper 3 floors. If 3 people live in each apartment, how many people live in the building?
- (A) $3x + 3y$
 - (B) $3x + 3y + 3$
 - (C) $9x + 9y$
 - (D) $3x + 3y + 18$
42. Joe spent 20% of his allowance on CDs. Then he spent 10% of what was left on a movie. After the movie, he was left with what percent of his original allowance?
- (A) 65%
 - (B) 70%
 - (C) 72%
 - (D) 75%
43. Each of the n members in an organization may invite up to 3 guests to a conference. What is the maximum number of members and guests who might attend the conference?
- (A) $n + 3$
 - (B) $3n$
 - (C) $3n + 4$
 - (D) $4n$

44. A square rug with each side 4 meters long is placed on a square floor. If each side of the rug is one-third the length of one side of the floor, what is the area, in square meters, of the floor?

(A) 144
(B) 96
(C) 64
(D) 16

USE THIS SPACE FOR FIGURING.

45. Figure 3 is composed of six squares. How many rectangles are there in the figure?

(A) 20
(B) 18
(C) 15
(D) 12

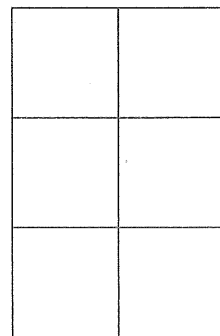


Figure 3

46. When Mr. Jones arrived at the grocery store, there were 8 cases of soda on the shelf. One case contained 11 cans of soda, and each of the others contained 6. If Mr. Jones bought all 8 cases, how many cans of soda did he purchase at this store?

(A) 53
(B) 54
(C) 57
(D) 59

47. When the sum of a set of numbers is divided by the average (arithmetic mean) of these numbers, the result is j . What does j represent?

(A) Half of the sum of the numbers in the set
(B) The average of the numbers in the set
(C) Half of the average of the numbers in the set
(D) The quantity of numbers in the set

GO ON TO THE NEXT PAGE

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no handwriting or other markings on the paper.

STOP

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ANSWER KEY**Section 1**

1. D
2. B
3. B
4. C
5. A
6. B
7. D
8. B
9. A
10. C
11. A
12. C
13. A
14. D
15. D
16. C
17. D
18. C
19. B
20. B
21. A
22. C
23. A
24. B
25. D
26. C
27. A
28. C
29. B
30. D
31. D
32. A

33. B

34. A
35. D
36. C
37. D
38. B
39. D
40. A

Section 2

1. C
2. D
3. B
4. B
5. C
6. D
7. D
8. B
9. D
10. C
11. B
12. C
13. C
14. D
15. B
16. C
17. B
18. D
19. A
20. D
21. D
22. D
23. A
24. C

25. B

26. A
27. D
28. B
29. A
30. B
31. D
32. B

33. D

34. B
35. A
36. C
37. B

Section 3

1. D
2. C
3. A
4. B
5. D
6. B
7. C
8. A
9. C
10. B
11. D
12. B
13. B
14. D
15. B
16. D
17. A
18. A
19. B

20. C

21. A
22. C
23. D
24. A
25. A
26. C
27. C

28. D

29. C
30. B
31. A
32. C
33. D
34. D
35. B
36. D

Section 4

1. C
2. D
3. B
4. D
5. B
6. C
7. D
8. B
9. D
10. C
11. C
12. B
13. D
14. C
15. D

16. D

17. A
18. A
19. B
20. A
21. C
22. C
23. C
24. C
25. D
26. C
27. B
28. C
29. B
30. D
31. B
32. C
33. B
34. B
35. D
36. B
37. B
38. A
39. A
40. D
41. C
42. C
43. D
44. A
45. B
46. A
47. D

ISEE PRACTICE TEST 2: UPPER- AND MIDDLE-LEVEL: ASSESS YOUR STRENGTHS

Use the following tables to determine which topics and chapters you need to review most. If you need help with your essay, be sure to review Chapter 9: The Essay and Chapter 26: Writing Skills.

Topic	Question
Verbal: Synonyms	Section 1, questions 1–20
Verbal: Sentence Completions	Section 1, questions 21–40
Quantitative Reasoning: Word Problems	Section 2, questions 1–22
Quantitative Reasoning: Quantitative Comparison	Section 2, questions 23–37
Reading Comprehension	Section 3, questions 1–36
Mathematics Achievement	Section 4, questions 1–47

Topic	Number of Questions on Test	Number Correct	If you struggled with these questions, study...
Verbal: Synonyms	20		Chapters 7 and 24
Verbal: Sentence Completions	20		Chapter 4
Quantitative Reasoning: Word Problems	22		Chapters 10–14 and Chapter 25
Quantitative Reasoning: Quantitative Comparison	15		Chapter 5
Reading Comprehension	36		Chapter 8
Mathematics Achievement	47		Chapters 10–14 and Chapter 25

ANSWERS AND EXPLANATIONS

SECTION 1: VERBAL REASONING

SYNONYMS

1. D

To desecrate is to commit a sacrilegious act—to defile.

2. B

To laud is to praise in a lavish manner (e.g., “The spectators lauded the efforts of the competing athletes.”).

3. B

To avert is to prevent something from occurring (e.g., “The disaster was averted by the air-traffic controller.”).

4. C

Piety is another word for religious faith.

5. A

Amoral means without “without moral code.” Ethics are a kind of moral code, so unethical is the best choice here.

6. B

Candor means honesty—a “candid camera,” for example, is one that shows real-life events.

7. D

Haughtiness means excessive pride—arrogance. (C), rudeness, might have been a tempting distractor, but rude people aren’t necessarily haughty.

8. B

To verify means to prove something (e.g., “The existence of UFOs has never been verified.”).

9. A

To deceive means to trick.

10. C

Look for secondary definitions—a fiction is a story that is untrue, so one possible meaning for fiction is falsehood (e.g., “His reputation was largely based on the fiction that he had fought in World War II.”).

11. A

Something that’s hardy is healthy (e.g., “a hardy troop of soldiers”).

12. C

Something that’s lyrical is like a singing voice—it’s musical.

13. A

Use roots here—*meta* means change, and *morph* means shape. So the closest synonym is change.

14. D

To lament for someone or something is to grieve.

15. D

Something that’s arid is dry (e.g., an arid desert). Word association could have worked here if you thought of *Arrid* the deodorant.

16. C

A perceptive person is observant—he or she is able to perceive things quickly and understand them.

17. D

An adamant person is convinced, resolute—stubborn (e.g., “Dave was adamant about his decision to buy a Range Rover™.”).

18. C

Neutral people or parties are impartial. They don't take sides—they're unbiased.

19. B

Docile means tame (e.g., "The aggressive dog became docile in later life.").

20. B

Wariness means caution—if you're wary, you're apprehensive about a situation.

SENTENCE COMPLETIONS

21. A

The clue words "come out at night" indicate that raccoons are nocturnal.

22. C

The two clue words "normally" and "usual" suggest that both blanks mean more or less the same—(C), amiable .. enthusiasm, works best here.

23. A

Death is a morbid subject, making (A) the best choice here.

24. B

You're looking for a contrast here; once a religious festival (B), the event is now commercialized.

25. D

A person who is constantly changing his views is described as flighty.

26. C

You're looking for a positive word for the first blank and a word meaning "deny" or "criticize" for

the second blank. (C), agility .. question, fits this description.

27. A

Predict a synonym for "guilt" here—(A), remorse, is the correct answer.

28. C

The first blank should mean "tiring," so rule out (A). The only choice that means "tired" for the second blank is (C), fatigued. So strenuous .. fatigued is the correct answer.

29. B

The phrase "not only . . . but . . ." indicates that the second word is slightly more extreme than the first. Since you're looking for negative-sounding words, (B), predictable .. absurd, fits best.

30. D

Predict a more extreme version of "respect" for the blank here; revered works best in this context.

31. D

The first blank here should express the writer's incredulity—after all, it's pretty amazing that Chinese silk showed up in Egypt. (D), incredible .. massive, best explains why this fact is so amazing.

32. A

"At first" should have clued you into the contrast here—the house seemed frightening, but later proved benign, or friendly.

33. B

You're looking for a contrast—once just a myth, UFO stories are now thought plausible or believable.

34. A

Again, there should be a contrast here—(A), sparse, means terse, brief, minimal, and verbose means excessively wordy.

35. D

The clue “charm his listeners” suggests a positive word here, such as (D), engaging.

36. C

Exhilarated best captures the mixture of fear and enjoyment suggested by the sentence—consistent with a first trip on a raft.

37. D

The key phrase here is “to equal and even—Wright’s successes.” So we’re looking for a word meaning more than equal. Choice (D), surpass, works nicely.

38. B

“Weighing more than seventy tons” leads us to predict a word like large or gigantic for the first blank. The word “yet” sets up a contrast for the second blank. We want a word like small for the second blank. Only (B), gargantuan, and (D), prodigious, work for the first blank. Of these two options, only choice (B), small, works for the second blank. So (B) is correct.

39. D

We are looking for a word that covers the wide variety of trumpets described in this sentence. Look for a word that means “varied” among the answer choices. Choice (D), diverse, works best.

40. A

Take this two-blank sentence one word at a time. For the first blank, we’re looking for a word that works

with “difficult to spot.” Elusive, (A), and crafty, (B), are the only choices that work. For the second blank, we’re looking for a word that sets up a contrast with “difficult to spot.” Choice (A), confined, works here.

SECTION 2: QUANTITATIVE REASONING

WORD PROBLEMS

1. C

$$Q + 7 - 8 + 3 = 23$$

$$Q + 2 = 23$$

$$Q = 21$$

2. D

A kilogram is equal to 1,000 grams. Remember, *kilo* means 1,000. A kilometer, for example, equals 1,000 meters.

3. B

To solve this problem, you need to find a common denominator. In this case, the lowest common denominator is 36.

$$\begin{aligned} \frac{1}{9} + \frac{7}{12} + \frac{5}{6} &= \frac{4}{36} + \frac{21}{36} + \frac{30}{36} \\ &= \frac{55}{36} \\ &= 1\frac{19}{36} \end{aligned}$$

4. B

$$\begin{aligned} 15\% \text{ of } 60 &= (15\%)(60) \\ &= (0.15)(60) \\ &= 9 \end{aligned}$$

5. C

To solve this problem, you first need to determine the limits of possible values for a :

$$a + 2 > 5$$

$$a > 3$$

$$a - 4 < 1$$

$$a < 5$$

So a is between 3 and 5. The only value from the answer choices that fits in the limits is (C), 4.

6. D

To solve this equation, we first need to find the value of x .

$$2x + 4 = 26$$

$$2x = 22, \text{ so } x = 11.$$

Therefore, $11 + 4 = 15$.

7. D

The key to solving this problem is to take in the information one piece at a time. We're told that we have an equilateral hexagon. *Equilateral* means that all sides are equal. A hexagon has 6 sides. If we divide 6 into 42, we have the measure of one side: 7. So two sides would total 14.

8. B

Angelo earns \$2,000. Of this money, he spends 30% on rent. We can easily turn this information into an equation.

$$\begin{aligned} \text{Rent} &= 30\% \text{ of } \$2,000 \\ &= (0.30)(\$2,000) \\ &= \$600 \end{aligned}$$

9. D

The eggs cost 16 cents apiece. We need to figure out how many eggs can make up for the cost of 6 new

chickens or 58 dollars. In other words, how many times does 16 cents divide into 58 dollars. Set this problem up as you would any division problem, paying attention to decimal places.

$$\begin{array}{r} 0.16 \overline{)58.00} \\ \underline{362.5} \\ 16 \overline{)5800.0} \end{array}$$

Since the farmer cannot sell half of an egg, he must sell 363 eggs.

10. C

Notice the use of the word "rate" in this problem. Don't be fooled by the terms "fuel" and "miles"—this is a straightforward rate problem, and you want to set it up as such. Twelve gallons of fuel for 48 miles is the same as how many gallons for 60 miles?

$$\begin{aligned} \frac{12}{48} &= \frac{x}{60} \\ 48x &= 12 \times 60 \\ x &= \frac{720}{48} = 15 \end{aligned}$$

11. B

To add mixed numbers, add the whole number parts and add the fraction parts. (Sometimes the sum of the fraction parts will be greater than 1, in which case you would need to make some adjustments.) To add the fraction parts, find a common denominator.

$$\begin{aligned} 1\frac{6}{11} + 1\frac{7}{22} &= 2 + \frac{6}{11} + \frac{7}{22} \\ &= 2 + \frac{12}{22} + \frac{7}{22} \\ &= 2\frac{19}{22} \end{aligned}$$

12. C

Use the average formula:

$$\text{Average} = \frac{\text{Sum of the items}}{\text{Number of items}}$$

$$9 = \frac{\text{Sum}}{6}$$

$$\text{Sum} = 9 \times 6 = 54$$

13. C

Let's consider each answer choice. (A) gives us the value $\frac{2}{3}$. But we know that x must be smaller than $\frac{1}{2}$, and since $\frac{2}{3}$ is not, we can eliminate it. (B) proposes 0.47, but x must be smaller than $\frac{1}{3}$, and 0.47 is not. (C) gives us $\frac{1}{5}$, which is smaller than $\frac{1}{3}$ but larger than $\frac{1}{10}$ —it fits the given criteria. Since there can only be one correct answer, there is no reason to check the last answer choice. Choice (D) is incorrect because $\frac{1}{20}$ is less than $\frac{1}{10}$ and x can not be less than $\frac{1}{10}$.

14. D

The best way to solve this problem is to solve for a .

$$3a + 6a = 36$$

$$9a = 36$$

$$a = 4$$

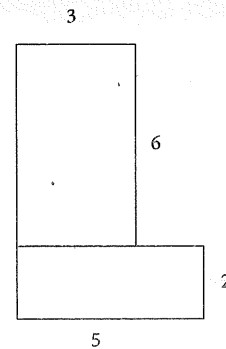
15. B

The easiest way to solve this problem is to convert $\frac{1}{4}$ to a decimal, 0.25, and then multiply. Again, make sure that you remember to count your decimal places.

$$(0.72) \times (0.25) = 0.18$$

16. C

The easiest way to solve this problem is to break the diagram on the right into two rectangles. Then solve for each area and add them together.



The area of the rectangle on top is $3 \times 6 = 18$. The area of the rectangle on bottom is $5 \times 2 = 10$. The total area is $18 + 10 = 28$.

17. B

First you need to break down 48 into its prime factors, and then you can determine how many *different* ones there are.

$$48 = 2 \times 24$$

$$= 2 \times 2 \times 12$$

$$= 2 \times 2 \times 2 \times 6$$

$$= 2 \times 2 \times 2 \times 2 \times 3$$

There are only two different prime factors for 48: 2 and 3.

18. D

Remember as you do this problem that a factor is a number that divides evenly into another number. Again, the easiest way to solve this problem is to consider each factor individually. (A) cannot be the answer because 3 is a factor of 36 and also 48. Ditto for (B), 6, and (C), 12. The answer must be (D), 18.

19. A

The formula for the volume of a cube is the length of a side cubed. We are told that the length of one side is 5. Five cubed equals 125, (A).

20. D

Doubling the rate that we are given, we have 2 hours and 30 minutes for Jake to review 60 pages. We know that the answer cannot be (A). But we need to figure out how long it will take Jake to review those final 10 pages. To do that, we can divide the rate it takes Jake to review 30 pages by 3; that will give us the rate it takes to read 10 pages. Then 1 hour and 15 minutes is the same as 75 minutes. A third of 75 is 25—we know it will take Jake 25 minutes to read 10 pages. Put it all together: 2 hours and 30 minutes plus 25 minutes gives us 2 hours and 55 minutes for Jake to read his history book.

21. D

If Mary types 12 words in 20 seconds, then she types 36 words in 60 seconds, or 1 minute. Thus, she types twice that, or 72 words, in 2 minutes.

22. D

Just substitute 8 for r in the equation: $(8 + 4)^2 = (12)^2 = 12 \times 12 = 144$.

QUANTITATIVE COMPARISONS

23. A

Remember to compare, not calculate: There is no reason to look for common denominators and solve here. The $\frac{1}{2}$ in Column A is just slightly larger than the $\frac{2}{5}$ in Column B. Both columns contain $\frac{3}{4}$. The $\frac{7}{8}$ in Column A is also larger than the $\frac{7}{9}$ in Column

B, so overall, whatever the total value, Column A is larger than Column B.

24. C

Put the expressions in Column A and Column B in the same form so they are easy to compare. First, simplify the value under Column A. It's easy to multiply these fractions together because they cancel easily, giving us a final value of $\frac{1}{20}$, which in decimal form is 0.05. The columns are equal.

25. B

This problem is similar to the one above. First simplify the value under Column A, making sure that you cancel whenever possible. Under Column A we end up with the value $\frac{4}{5}$, which is less than 1. The value under Column B is $\frac{5}{4}$, which is greater than 1. So, the answer is (B).

26. A

The fastest way to solve this problem is to determine the value of x .

$$3x - 12 = 3x - 6x$$

$$-12 = -6x$$

$$2 = x$$

So x equals 2. If you add 2 to x , you get 4, a value larger than the 2 in Column B. So Column A is larger.

27. D

The answer to this problem is (D). All we know about x and y is that both are positive. We don't know their relative values: We don't know if x is greater than y or vice versa. Consequently, we can't determine if adding the number 1 to the value of x would make Column A greater, less than, or equal

to the value under Column B. The answer here must therefore be (D).

28. B

Find the value of each column:

$$\begin{aligned} 5\% \text{ of } (3 + 4) &= 5\% \text{ of } 7 \\ &= (0.05)(7) \\ &= 0.35 \end{aligned}$$

$$\begin{aligned} 4\% \text{ of } (3 \times 4) &= 4\% \text{ of } 12 \\ &= (0.04)(12) \\ &= 0.48 \end{aligned}$$

29. A

The easiest way to solve this problem is to change the value under Column B, a fraction, into a decimal.

Thus, $\frac{9}{20}$ is the same as $\frac{45}{100}$ or 0.45. Column A, with a value of 0.46, is larger than Column B.

30. B

This problem requires no math at all. You are given a certain amount of money—5 dollars. Can you buy more expensive items (32-cent stamps) or more cheap items (29-cent stamps) with this money? You can buy more of the cheaper items, so the answer must be Column B.

31. D

You're given that x is between $\frac{8}{9}$ and $\frac{1}{2}$, and you're asked to compare x to $\frac{2}{3}$. The fraction $\frac{2}{3}$ is between $\frac{8}{9}$ and $\frac{1}{2}$, but so are lots of other fractions, some less than $\frac{2}{3}$ and others greater than $\frac{2}{3}$. Column A could be greater than, equal to, or less than Column B, so the answer is (D).

32. B

This is another problem that takes no math at all. We are told that x is negative. Before you start plugging in values for x , you should take a look at the expression under Column B: $(2x)(1x)$. If you multiplied these x 's together, whatever the value, the result would be positive. The value under Column A, however, would remain negative. Since a positive is always greater than a negative, the answer has to be (B).

33. D

Don't be fooled by the number 8 under Column B. Column A asks you to find the perimeter of an octagon with sides of equal length. The problem is, we don't know what those lengths are. One side could equal 1, in which case the answer would be (C). One side could be 2, in which case the answer would be (A). We already have two possibilities, which tells us that the correct answer must be (D).

34. B

The factors of 21 are 1, 3, 7, and 21. Of these only two are prime. Compare that to the value under Column B, 3, and the answer is (B).

35. A

Translate the expression into an equation: $\frac{5}{7}$ of x is 35.

$$\begin{aligned} \frac{5}{7}x &= 35 \\ x &= 35 \times \frac{7}{5} \\ x &= 49 \end{aligned}$$

36. C

Remember the saying "A percent of B is equal to B percent of A"? If you do, then this question is a breeze. If not, you want to commit that rule to memory. In this case, 98% of 51 is $0.98 \times 51 = 49.98$,

and 51% of 98 is $0.51 \times 98 = 49.98$. The columns are equal.

37. B

There are a few ways to solve this problem. The first is to actually calculate the math. Twenty percent of 42 is the same as $(0.20)(42)$ or 8.4. The other way to do this problem is to realize that 20% of 42 is the same as taking $\frac{1}{5}$ of 42. We know that $\frac{1}{5}$ of 45 is 9, the value under Column B. But we want $\frac{1}{5}$ of 42, which will be less than 9. In either case, the answer must be (B).

SECTION 3: READING COMPREHENSION

LOG CABINS PASSAGE

The first passage is about log cabins and the era of their greatest popularity—a period from 1780 to 1850. The author describes early simple cabins and grand later ones and then discusses the factors that led to a decline in the log cabin's popularity, factors like the greater availability of hardware and building materials, the rising popularity of the Greek Revival style of house, and the spread of the railroads.

The passage ends with a brief description of what happened to most log cabins as their heyday ended.

1. D

The Greek Revival style is described as becoming increasingly popular, “with [i.e., because of] its democratic roots in ancient Greece....” So the origins of the new style lay in the ancient democracy of Greece—a fact that might well have appealed to the citizens of a young democratic nation like the United States—and (D) is the best answer. The passage never suggests that there had been a general desire to replace log cabins, (A), and never mentions contemporary Greek architects, (B), or devoutly religious Americans, (C).

2. C

The first sentence says that “a great number of settlers forged westward.” What word plugs in best for “forged”? (C) moved. Fled, (A), incorrectly implies that the settlers were running away from something; wandered, (B), implies that their movements were aimless, without purpose. Returned, (D), suggests that the settlers had already been out west, which makes little sense in context.

3. A

The author indicates that Greek Revival houses became more popular than log cabins for two reasons: the democratic roots of the Greek Revival style and the temple fronts of these houses, which faced the street. This last feature—that the fronts of Greek Revival houses faced the street—suggests that log cabins became less popular because they didn't always face the street, which makes (A) correct. The passage doesn't suggest that either style of house had indoor plumbing, (B), or that log cabins could not have glass windows, (C). And while log cabins may well have been built near lakes and rivers, (D), there's no suggestion that Greek Revival homes were not. So (A) is the correct answer.

4. B

The question stem's reference to limiting factors in the architecture of log cabins recalls sentence 6: “Climate and the proximity of the local forest no longer set architectural limits.” What does this mean? It means that, with the new railroads bringing lumber and hardware to formerly isolated regions, a settler's choice of which house to build was no longer dictated by local weather and the distance to the nearest forest. (B) restates this latter point, and it's correct. (A) is incorrect because, unlike logs from the local forest, nails were not widely available. (C) and (D) bring up issues that aren't mentioned at all in the passage and so cannot be inferred.

5. D

The passage's final sentence notes that, after the 1850s, log structures housed livestock but "fewer and fewer people." So most log structures built after 1850 housed animals, (D).

6. B

Find the right answer by using the passage to answer the questions asked in the choices. (A) can be answered in lines 1–3; log cabins actually grew in popularity because settlers were moving west. (C) is answered in lines 10–12; the style's "democratic roots in ancient Greece and its temple front facing the street" were desirable. (D) can be answered in lines 3–6; log cabins grew from being primitive to being sophisticated, two-story houses. (B) is the answer because the author does not say log cabins have disappeared.

PLAGUE PASSAGE

Next up is a passage about the plague, an epidemic that killed one-third of the people in Europe in the 13th and 14th centuries. The author says that, ironically, the plague brought about some beneficial changes in European society. One of these changes—the focal point of the passage—was in the medical profession. The plague created a shortage of doctors, allowing people with new ideas to enter the profession. In addition, having been failed by the old doctors with their Latin medical texts, ordinary people began clamoring for medical texts printed in everyday languages. These were eventually published, making medical knowledge more accessible to everyone.

7. C

As noted above, the primary focus of the passage is how at least one good thing came out of the terrible

tragedy of the plague. (C) correctly restates this idea. (A) and (B) focus too narrowly on details mentioned in sentences 1 and 4. (D) is closer to the mark, but it too is a detail, not the larger focus of the passage.

8. A

Plug the choices into the sentence in question, and (A) is correct: The epidemic caused enormous changes in European society. The changes were needed, (B), but needed by the society, not by the plague itself. Accelerated, (C), means moved faster, which implies that the changes were already occurring before the plague. But the passage never suggests that this was so. Offered, (D), doesn't work at all.

9. C

Sentence 6 says that, when the plague created a shortage of doctors, "people with new ideas" rushed in to fill the void, bringing needed reform (sentence 3) to the medical profession. This suggests that, prior to the plague, the medical profession was in need of new ideas—sweeping changes—which makes (C) correct. The shortage of doctors, (A), occurred during and after the plague, not before it. As for (B), while sentence 5 says that universities were short on medical professors, there's no evidence that medical care was available only to students in the pre-plague years. And (D) distorts the final sentence, which says that people demanded medical texts printed in their own languages, not the language of Latin. This doesn't mean that, before the plague, medicine was only practiced in Latin-speaking countries. (Latin is, in fact, and was even then, a "dead" language, the language of the long-vanquished Roman Empire.)

10. B

Take another look at the last sentence of the passage. It says that medical texts gradually began to be

published in everyday languages instead of in Latin, “making medical knowledge more accessible.” You can infer from this that, after the 1300s, easy-to-read medical texts were probably more available to the general public, an idea restated in choice (B). The passage never indicates that a cure for the plague, (A), would soon be found (in fact, it would not be found for several centuries). As for (C), just because more medical texts were published in everyday languages after the plague doesn’t mean that, a hundred years later, none were written in Latin. Finally, (D) is completely unsupported by the passage.

11. D

Are the author’s points positive, negative, or neutral? The author talks about the negative effects of the plague, but he or she focuses more on the positive effects. The author says that medical knowledge became more accessible to people and that it led to medical reform. That rules out (A) and (B), leaving favorable and sensible. Next, think about how the passage would sound if you read it aloud. Does it sound as if the author expresses approval about the outcome of the plague (favorable), or does it sound as if he or she has based his argument on sound reasoning (sensible)? Although, the author recognizes that the plague had positive effects, he or she also points out the negative—one-third of the European population died. (D) is the better answer.

12. B

Try to find each of the choices in the passage. (A) is in lines 15–17; the author says new medical texts in everyday languages made “medical knowledge more accessible.” (C) is in lines 10–12; people with new ideas took the place of doctors who died or fled during the plague. (D) is in lines 3–4. (B) is

the answer because it is not fully addressed in the passage. The author says in lines 15–17 that medical texts began appearing in languages other than Latin, but that doesn’t mean more people did not learn Latin.

ORIENTEERING PASSAGE

The fourth passage is about the sport of orienteering, in which competitors make their way across unfamiliar terrain using only a map and a compass. The author focuses on the notion that the most important element of orienteering is choosing a good route. Why? Because the shortest route from point A to point B is rarely the fastest or easiest way.

13. B

What defines orienteering, if not having a compass and a map? Orienteers have to “navigate their way cross-country along an unfamiliar course.” Therefore, a hiker with a map and compass is NOT orienteering if she travels over a known, familiar route, and (B) is correct. (A) and (C) propose rules that are never mentioned in the passage. (D) describes an orienteer who takes the “crude” approach.

14. D

As sentence 2 puts it, “the most important question in orienteering is not compass bearing but choice of route,” which eliminates (A) and makes (D) correct. While it is no doubt important to avoid hazardous terrain, (B), and to overcome obstacles quickly, (C), the passage places the highest priority on the choice of route.

15. B

The competitor in question climbs a mountain to take the most direct route, but sentences 3 and 4

say that this is “seldom the best” and that orienteers “tend to disdain” competitors who do so as crude and lacking intellectual finesse, or sophistication, (B). (A) is incorrect because the competitor’s beeline approach will probably put him at a disadvantage in terms of both time and energy. The beeline approach may be stupid, but the author never says it’s against the rules, (C), or that it can endanger other competitors, (D). So (B) is correct.

16. D

The passage never mentions running or backpacks, (A), swimming, (B), or setting up campsites, (C). So (D) must be correct. In fact, the final sentence of the passage notes that orienteers “are always making” quick calculations of the times and distances involved in various possible routes.

17. A

Look at the sentence “finesse” appears in. The author contrasts “intellectual finesse” with “beelining over obstacles,” which means orienteers would rather use their minds before acting, so you know the answer’s not (B). (C) is wrong, too, because “intellectual inefficiency” doesn’t make sense. That leaves “skill” (ability) and “devotion” (dedication). (A) is the answer.

18. A

Questions about the author’s attitude are generally asking about the tone of the passage. Are the author’s points positive, negative, or neutral? The passage doesn’t discuss downfalls or troubles orienteers might have, but it does talk about their “intellectual finesse” and the “quick calculation orienteers are always making.” That rules out (B) and (C), leaving “respect” and “appreciative.” Next, think about how the passage would sound if you read it aloud. Does

it sound as if the author is holding orienteers in high regard, or does it sound as if the author is showing gratitude to orienteers? (A) is the answer.

NIGHT TERRORS PASSAGE

Next up is a passage about two psychological phenomena: first, nightmares, and second, something called night terrors. In the latter the sleeper, usually a child, wakes up in great fright with no memory of having dreamed. The passage begins with the statement that, while nightmares and night terrors used to be confused with each other, researchers now know they are two different phenomena. The rest of the passage focuses on night terrors, noting that they’re not really dangerous and that parents should use common sense, taking precautions and not worrying unduly.

19. B

Two phenomena, long “confounded” under one heading, are now known to be separate things. The word in question, then, should mean confused, or mixed up, (B). None of the other words means anything remotely similar to “confounded.”

20. C

The correct answer, (C), restates the first sentence of the passage. None of the other choices are suggested, not even (D), which is a distorted echo of the passage’s final sentence. The author says that children suffering from night terrors should usually not be medicated. This is a far cry from saying that sleep researchers used to prescribe medication for such children but have recently stopped.

21. A

Sentence 2 says that a nightmare “is an actual, detailed dream.” (A) correctly restates this fact.

No mention is made of dream fragments, (B), hallucinations, (C), or trances, (D).

22. C

What do we know about the parents of children who suffer from night terrors? That these parents themselves sometimes find their child's experience "horrifying" and that a child suffering from night terrors can make a parent "anxious." We can infer, then, that the parents find night terrors nearly as frightening as the children do, and (C) is correct. (A) is the opposite of what the author says. (B) makes an unwarranted leap; the passage never suggests that these parents also suffered night terrors when they were children. And the last sentence of the passage implies, if anything, that a doctor usually should not be consulted at all, rather than as soon as possible, (D).

23. D

The difference between nightmares and night terrors, (A), is defined in sentences 2 and 3. The question in (B) is answered in the second-to-last sentence of the passage. Sentence 3 notes that the child waking from a night terror does not remember dreaming, (C). This leaves (D) as correct, and indeed, the author merely advises a sleep schedule, never explaining why a sleep schedule helps reduce night terrors.

24. A

How would you answer this question in your own words? Lines 3 and 5 use contrast phrases: "On the one hand" and "On the other." Those are hints to where to find the difference between nightmares and night terrors. (B) is incorrect, and (C) and (D) are not addressed in the passage.

NEANDERTHALS PASSAGE

This passage is about the Neanderthal, an early human that lived in Europe and Asia until about 35,000 years ago. The passage puts forth two ideas: first, that Neanderthals were physically very different from modern humans and second, that despite their reputation to the contrary, Neanderthals were probably quite intelligent. The passage concludes with a teaser: The disappearance of this capable creature mystifies and fascinates scientists and is "perhaps the most talked-about issue in human origins research today."

25. A

All four choices are physical attributes of the Neanderthal. In the author's description of Neanderthals, found in sentence 3, "massive limb bones" are the first item on the list. A "limb" is an arm or a leg, so you can infer from this that most Neanderthals had big arms, (A). You can't infer, however, that their legs were bowed, (C), because "bowed" implies shape, not size. The set of Neanderthal eyes, (A), and the breadth of their feet, (D), are never mentioned.

26. C

The opening sentence says that Neanderthals lived "throughout Europe and western Asia," which makes (C) correct. The passage never says what kind of dwellings they lived in, (A), how they hunted, (B), or whether they lived on all the continents, (D).

27. C

The author says that Neanderthals, unlike modern humans, had "massive limb bones," and "enormous physical strength." Modern humans, then probably have less physical strength than their Neanderthal

cousins, and (C) is correct. No information is given on either species' eyesight, (A), sense of smell, (B), or amount of body hair, (D).

28. D

The only reference to what modern humans think of Neanderthals comes at the beginning of sentence 4: "yet despite the Neanderthals' reputation for low intelligence...." (D) is thus the correct inference.

29. C

The word "question" appears only once in the passage, in the final sentence. We know from the previous sentence that Neanderthals vanished or died out around 35,000 years ago. "The question of what became of the Neanderthals...." Therefore, (C) is correct. The questions of the Neanderthals' diet, (A), migratory patterns, (B), and origins, (D), are never raised in the passage.

30. B

Think about where you would most likely find this passage. (A) is incorrect because the passage contains nothing fictional. (C) is incorrect because it is unlikely an explorer would encounter Neanderthals, who lived at least 35,000 years ago. (D) is incorrect because the passage doesn't discuss nutrition, exercise, or any other health topic. (B) is the answer because the passage sticks to facts about Neanderthals.

COYOTES PASSAGE

The final passage is about coyotes. The author's main focus is not on the behavioral habits of living coyotes, but rather on the evolution of the coyote as found in the fossil record. Both the coyote and the wolf, we learn, had a common ancestor living in North America as long as three million years ago.

One or two million years ago, the coyote and the wolf became separate species. As time passed, other species such as the mammoth and the saber-toothed tiger lived and became extinct, but the coyote endured—basically the same primitive animal, but still marvelously adaptable to its environment.

31. A

In most passages, the main idea is stated in the first or second sentence. Here the main idea becomes clear only at the end: that the coyote has endured for millions of years without evolving into a more advanced species. This point is restated in correct choice (A). (B) focuses on a detail, how other species came and went. But these species are described in order to provide a contrast with the coyote, which not only avoided extinction but did so without evolving. (C) has the same problem: The author's point is that, unlike other animals, the coyote did not change—it survived by staying the same. And (D) is a passing detail found in sentence 4—not significant enough to be the primary focus of the passage.

32. C

"Modern" dogs are mentioned only in the first sentence, which says that coyotes are "one of the most primitive of living dogs." This suggests that modern dogs are relatives of coyotes, as stated in (C). Dire wolves are extinct "canids"; we don't know from the passage whether they're related to modern dogs or not, but it's a pretty safe bet that modern dogs are not "direct descendants of dire wolves," as (A) suggests. Where modern dogs live, (B), is not mentioned, but again, common sense suggests they're found everywhere, not just in North America. The evolutionary flexibility of modern dogs (D) is not discussed in the passage.

33. D

Sentence 2 says that “a close relative of the contemporary coyote existed here two to three million years ago.” The choice closest to this estimate is (D), and it’s correct.

34. D

Why does the author mention mammoths and saber-tooth tigers? Because they lived and became extinct, while the ever-adaptable coyote endured. In other words, these species died out because they failed to adapt as the coyote did, and (D) is correct. Neither animal in question is described as a relative of the coyote, (A). Unlike wild horses, mammoths and tigers are not described as having left North America by land bridge, (C), but that’s beside the point. These species died out because they couldn’t adapt—as the coyote did. And the author never says that jackals hunted any species into extinction, (D).

35. B

Here’s a word-in-context question that really requires you to know the meaning of the word—the word, in this case, being “galleon.” Maybe you’ve come across it in pirate stories; a galleon is a kind of ship. So the idea that other horses “returned on galleons” means that horses, who had left North America by land bridge, returned to the continent when brought by ship, making (B) correct. None of the other choices picks up on the proper meaning of “galleon.”

36. D

Try to find evidence in the passage supporting each of the choices. (A) is found in lines 11–13: “Mammoths ... and dire wolves ... came and went.” (B) is in lines 13–14: “Native horses left the continent ... and others returned in galleons.” (C) is in lines 8–10: “a division occurred in North America between the coyote and the wolf.” (D) is the answer because it is incorrect. The passage says they have

existed a long time, living even as “time passed, and glaciers advanced and receded” (lines 10–11) and that they have always adjusted to the changes (lines 17–18).

SECTION 4: MATHEMATICS ACHIEVEMENT

1. C

$(x - 2)(x + 5)$ will equal 0 when either factor $(x - 2)$ or $(x + 5)$ is 0. That’s when x is 2 or -5 .

2. D

Set up a proportion. Here 2 gallons for 875 square feet is the same as x gallons for 4,375 square feet:

$$\begin{aligned}\frac{2}{875} &= \frac{x}{4,375} \\ 875x &= 2 \times 4,375 \\ 875x &= 8,750 \\ x &= \frac{8,750}{875} = 10\end{aligned}$$

3. B

Use the formula for the area of a triangle:

$$\begin{aligned}\text{Area} &= \frac{1}{2} (\text{base})(\text{height}) \\ &= \frac{1}{2} (4 \text{ in.})(6 \text{ in.}) = 12 \text{ sq. in.}\end{aligned}$$

4. D

The sides of an equilateral triangle are equal in length, so $3x + 1$ and $x + 7$ are equal:

$$\begin{aligned}3x + 1 &= x + 7 \\ 3x - x &= 7 - 1 \\ 2x &= 6 \\ x &= 3\end{aligned}$$

Plug $x = 3$ back into either of the expressions, and you’ll find that the length of each side is 10.

5. B

Sixty-five times 10^2 means 65 times 100, or 6,500. Thirty-one times 10^3 means 31 times 1,000, or 31,000. Add 6,500 and 31,000 and 12 and you get 37,512.

6. C

He lost 20% of \$120,000, which is 0.20 times \$120,000, or \$24,000.

7. D

The dog can run in a circular area with radius of 8 meters. Use the formula for the area of a circle:

$$\begin{aligned}\text{Area} &= \pi(\text{radius})^2 \\ &= \pi(8 \text{ meters})^2 \\ &= 64\pi \text{ square meters}\end{aligned}$$

8. B

Rate is distance divided by time. So 328 miles divided by 4 hours is $\frac{328}{4} = 82$ miles per hour.

9. D

If distance equals rate times time, then time equals distance divided by rate. Here the distance is 3,300 miles and the rate is 270 miles per hour. And 3,300 miles divided by 270 miles per hour is $\frac{3,300}{270} \approx 12.22$ hours.

10. C

Plug $a = 3$ and $b = 4$ into the expression:

$$\begin{aligned}a^2 + 2ab + b^2 &= 3^2 + 2(3)(4) + 4^2 \\ &= 9 + 24 + 16 \\ &= 49\end{aligned}$$

11. C

Look what happens when you just add the equations as presented:

$$x - y = 5$$

$$4x + 6y = 20$$

$$5x + 5y = 25$$

Now just divide both sides by 5, and you get $x + y = 5$.

12. B

Break 726 down to its prime factorization by factoring out any prime factor you see one at a time:

$$\begin{aligned}726 &= 2 \times 363 \\ &= 2 \times 3 \times 121 \\ &= 2 \times 3 \times 11 \times 11\end{aligned}$$

The distinct prime factors are 2, 3, and 11. That's 3 distinct prime factors.

13. D

Plug any odd number in for n and evaluate the answer choices. If you take $n = 3$, you'll find that (A) is $-2(3) - 1 = -7$; (B) is $2(3) + 1 = 7$; (C) is $2(3) - 1 = 5$; and (D) is $4(3) = 12$. Only (D) is even.

14. C

Six hours a day for 5 days is 30 hours; 30 hours is $30 \times 60 = 1,800$ minutes; and 1,800 minutes is $1,800 \times 60 = 108,000$ seconds.

15. D

There are $4 \times 24 = 96$ hours in 4 days. Then 96 hours of snow at 3.5 inches per hour is $96 \times 3.5 = 336$ inches.

16. D

Today Nicholas is x years old and Billy is $3x$ years old. Five years ago Nicholas was $x - 5$ years old and Nicholas was $3x - 5$, so the sum of their ages was $(x - 5) + (3x - 5) = 4x - 10$.

17. A

If there are twice as many boys as girls, then $\frac{2}{5}$ of the students are boys and $\frac{1}{5}$ are girls. Two-thirds of 36 is

24.

18. A

The $\frac{1}{3}$ who drank soda only and the $\frac{2}{5}$ who drank juice only account for $\frac{1}{3} + \frac{2}{5} = \frac{5}{15} + \frac{6}{15} = \frac{11}{15}$ of the guests. The 16 who drank nothing therefore account for the other $\frac{4}{15}$. So you want to find out what number multiplied by $\frac{4}{15}$ will give you 16: $\frac{4}{15}x = 16$; $x = 16 \times \frac{15}{4} = 4 \times 15 = 60$.

19. B

You might think that x has to be 2 and y has to be 3, but in fact there's another pair of consecutive integers that have a product of 6: -3 and -2 . So what you know is that either $x = 2$ and $y = 3$, or $x = -3$ and $y = -2$. All three statements are true in the first case (when x and y are positive), but only statement II is true in the second case (when x and y are negative).

20. A

She starts with y cards. Giving away 5 to each of 3 friends means giving away $3 \times 5 = 15$, leaving her with $y - 15$. Receiving 2 from each of 3 friends means receiving $3 \times 2 = 6$, leaving her with $y - 15 + 6 = y - 9$.

21. C

For each coin the probability of tails is $\frac{1}{2}$. The combined probability is the product of the separate probabilities: $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$.

22. C

Five minutes at 15 copies per minute is $5 \times 15 = 75$ copies. Then 75 out of 600 is $\frac{75}{600} = \frac{1}{8}$.

23. C

Simplify each inequality:

$$\begin{aligned} 2(z-3) &> 6 \\ 2z-6 &> 6 \\ 2z &> 6+6 \\ 2z &> 12 \\ z &> 6 \\ z+4 &< 15 \\ z &< 15-4 \\ z &< 11 \end{aligned}$$

So z is between 6 and 11. The only answer choice that qualifies is (C), 7.

24. C

Three fiction books for every 8 nonfiction books means that 8 out of $3+8$, or $\frac{8}{11}$, of all the books are nonfiction. The 600 nonfiction books are $\frac{8}{11}$ of the number you're looking for, so:

$$\begin{aligned} \frac{8}{11}x &= 600 \\ x &= 600 \times \frac{11}{8} = \frac{6,600}{8} = 825 \end{aligned}$$

25. D

(D) is impossible because if x and y were even and z were odd, then $x+y$ would be even and $x+z$ would be odd.

26. C

If you call the passing grade x , then his second score was $x+7$, and his third score was $x+7-12 = x-5$, which is 5 less than x .

27. B

If 70 percent are right-handed and the rest are left-handed, then $100 - 70 = 30$ percent are left-handed. Of that 30 percent, 70 percent have brown eyes. Seventy percent of 30 percent is $(0.70)(0.30) = 0.21$, or 21 percent.

28. C

Plug $q = 8$ and $r = 2$ into the definition:

$$\begin{aligned} q/r &= (qr) - (q - r) \\ 8/2 &= (8 \times 2) - (8 - 2) \\ &= 16 - 6 = 10 \end{aligned}$$

29. B

Plug $q = P$ and $r = 3$ into the definition:

$$\begin{aligned} q/r &= (qr) - (q - r) \\ P/3 &= (P \times 3) - (P - 3) \\ &= 3P - P + 3 \\ &= 2P + 3 \end{aligned}$$

Set that equal to 11 and solve for P :

$$\begin{aligned} 2P + 3 &= 11 \\ 2P &= 11 - 3 \\ 2P &= 8 \\ P &= 4 \end{aligned}$$

30. D

Since a is anything greater than 4, a can be 8 or 16, so b doesn't have to be 2—which eliminates statement I. But you do know that b has to be positive, because a is positive (it's greater than 4) and the product of a and b is positive (it's 16). Therefore the sum of a and b is positive, and statement II is true. And lastly, when $a = 8$, $b = 2$; and when $a = 16$, $b = 1$. Thus, a is greater than b , and statement III is true.

31. B

The three angles have to add up to 180° , so:

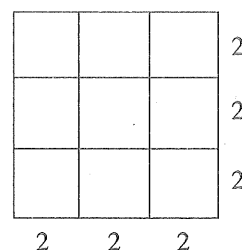
$$\begin{aligned} x + 2x + 3x &= 180 \\ 6x &= 180 \\ x &= 30 \end{aligned}$$

32. C

AB is half of BC , which is given as 12, so $AB = 6$, and $AC = 6 + 12 = 18$. CD is half of AC , so $CD = 9$, and thus $AD = AB + BC + CD = 6 + 12 + 9 = 27$.

33. B

A square with an area of 36 square centimeters has sides of length 6 centimeters. Thus each side of the large square gets cut into thirds, and the whole large square gets divided into $3 \times 3 = 9$ smaller squares:



34. B

Just subtract 5 from both sides of the given equation:

$$\begin{aligned} x &= 4y + 3 \\ x - 5 &= 4y + 3 - 5 \\ &= 4y - 2 \end{aligned}$$

35. D

Four for a dollar means 25 cents each. Selling them for 40 cents each means a profit of 15 cents on every orange sold. To get a total profit of \$3.00, he must sell $\frac{\$3.00}{\$0.15} = \frac{300}{15} = 20$ oranges.

36. B

Each sale price is 90% of the original price. Sixty-three dollars is 90% of what?

$$0.90x = \$63$$

$$x = \$\frac{63}{0.90} = \$70$$

The original price of the wool sweater was \$70. And \$45 is 90% of what?

$$0.90y = \$45$$

$$y = \$\frac{45}{0.90} = \$50$$

The original price of the cotton sweater was \$50. The difference was \$20.

37. B

It took him a hour and a half to do the first one-third, so it will take him twice that long—or 3 hours—to do the remaining two-thirds. To finish by 11:00 P.M., he must resume by 8:00 P.M.

38. A

If there are twice as many men as women on the team, then two-thirds of the team members are men and one-third are women. One-third of 45 is 15, so there are 15 women. One-third of those 15 women received medals, so that's 5 women medal winners.

39. A

The four fractions you're comparing all have the same numerator (1) and they all have positive denominators, so the fraction with the least value must be the one with the greatest denominator. m is greater than n , so $4m$ is greater than $4n$, and $4 + m$ is greater than $4 + n$. That eliminates (B) and (D). And since m is greater than 4, $4m$ is greater than $4 + m$. Thus, (A) has the greatest denominator and therefore the least value.

40. D

Translate into algebra. If one-fifth of a number is less than 20, then:

$$\frac{1}{5}x < 20$$

$$x < 20 \times \frac{5}{1}$$

$$x < 100$$

41. C

The lower three floors have a total of $3x$ apartments. The upper three floors have a total of $3y$ apartments. That's a total of $3x + 3y$ apartments in the building. If there are 3 people in each apartment, then the total number of people is 3 times $(3x + 3y)$, or $9x + 9y$.

42. C

After spending 20% on CDs, Joe had 80% left. He then spent 10% of that, or 8% of the original amount, leaving

$$100\% - (20\% + 8\%) = 72\%.$$

43. D

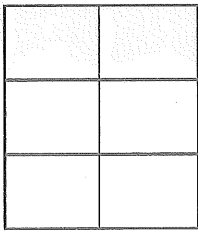
If every one of the n members invited 3 guests, that would be a total of $3n$ guests. n members plus $3n$ guests adds up to $n + 3n = 4n$ attendees.

44. A

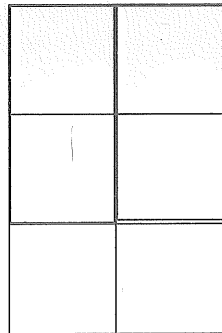
If each side of the 4-by-4 rug is one-third of the sides of the floor, then it's a 12-by-12 floor, which would have an area of 144 square meters.

45. B

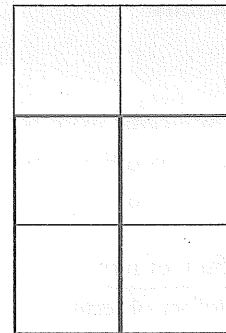
Each of the six squares is a rectangle.



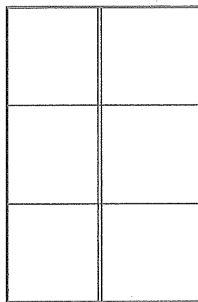
Plus there are these two rectangles:



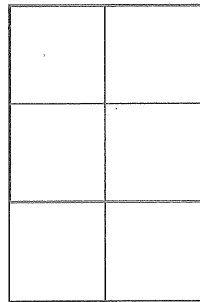
And these two:



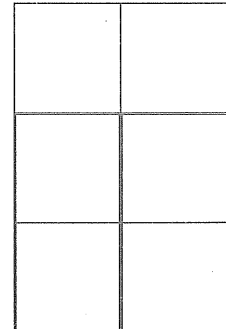
And these two:



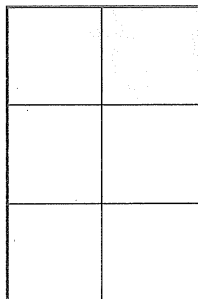
Plus this one:



And this one:



And lastly this one:



That's a total of $6 + 3 + 2 + 2 + 2 + 1 + 1 + 1 = 18$.

46. A

Mr. Jones bought 1 case with 11 cans and 7 cases with 6 cans each, so he bought $1(11) + 7(6)$ or $11 + 42 = 53$ cans of soda.

47. D

Translating complicated word problems into written equations can help you figure out where to get started. Solve for j using the average formula:

$$\text{Average} = \frac{\text{Sum of terms}}{\text{Number of terms}}$$

Now, express this as $\frac{\text{Sum of terms}}{\text{Average of terms}} = \text{Number} = j$.