SSAT 2015

SECTION 1
WRITING THE ESSAY

Time: 25 minutes

Directions: Using two sheets of lined theme paper, plan and write an essay on the topic assigned below. DO NOT WRITE ON ANOTHER TOPIC. AN ESSAY ON ANOTHER TOPIC IS NOT ACCEPTABLE.

Topic: High schools should require students to maintain a certain grade point level in order to play on competitive sports teams.

Assignment: Do you agree or disagree with this statement? Support your position with specific examples.

SECTION 2
VERBAL REASONING

Time: 20 minutes
60 Questions

Directions: This section is divided into two parts that contain different types of questions. As soon as you have completed Part One, answer the questions in Part Two. You may write in your test booklet. For each answer you select, fill in the corresponding circle on your answer document.

Part One

Directions: Each question in Part One is made up of a word in capital letters followed by four choices. Choose the one word that is most nearly the same in meaning as the word in capital letters.

Example	Answer
SWIFT: (A) clean (B) fancy (C) fast (D) quiet	Ⓐ Ⓑ ● Ⓓ

1. EVASION:
   (A) displeasure
   (B) enjoyment
   (C) avoidance
   (D) fatigue
   (E) attack

2. INDISPENSABLE:
   (A) essential
   (B) ungovernable
   (C) confused
   (D) impetuous
   (E) incontrovertible

3. OBLITERATE:
   (A) exhibit
   (B) maintain
   (C) subjugate
   (D) erase
   (E) obligate

4. AMIABLE:
   (A) friendly
   (B) indignant
   (C) disjointed
   (D) introverted
   (E) allied

5. WRITHE:
   (A) twist
   (B) slide
   (C) topple
   (D) trouble
   (E) strangle

6. ABATE:
   (A) placate
   (B) intimidate
   (C) continue
   (D) forego
   (E) let up

7. ENDORSEMENT:
   (A) standard
   (B) editorial
   (C) article
   (D) approval
   (E) inscription

8. CONVERT:
   (A) transform
   (B) weave
   (C) translate
   (D) predict
   (E) reform

9. ERUDITE:
   (A) eroded
   (B) knowledgeable
   (C) meddlesome
   (D) intrusion
   (E) careless

10. ENDEAVOR:
    (A) ability
    (B) expectation
    (C) attempt
    (D) tack
    (E) necessity

11. BATTERY:
    (A) group
    (B) ambush
    (C) delirium
    (D) corner
    (E) precarious

12. PATIENT:
    (A) military
    (B) tolerant
    (C) multiple
    (D) irregular
    (E) leisure

13. PAINSTAKING:
    (A) delicate
    (B) disease
    (C) medicine
    (D) generic
    (E) scrupulous

14. PRELUDE:
    (A) soprano
    (B) postlude
    (C) symphony
    (D) drama
    (E) beginning

15. REVERENCE:
    (A) simplicity
    (B) love
    (C) nonfiction
    (D) glory
    (E) respect

16. UNUSUAL:
    (A) sincere
    (B) common
    (C) ordinary
    (D) rare
    (E) pedantic

17. NOISE:
    (A) crowd
    (B) siren
    (C) music
    (D) locomotive
    (E) sound

18. EXPRESS:
    (A) quickly
    (B) overnight
    (C) holster
    (D) verbalize
    (E) careful

19. KIND:
    (A) equal
    (B) good
    (C) quality
    (D) significant
    (E) hermitage

20. CLANDESTINE:
    (A) overt
    (B) exclusive
    (C) fortunate
    (D) dated
    (E) secret

21. PREVAIL:

 (A) cover

 (B) entrust

 (C) enlighten

 (D) triumph

 (E) predict

22. PRANCE:

 (A) sing

 (B) strut

 (C) pry

 (D) boast

 (E) lead

23. PROFOUND:

 (A) perplexing

 (B) absurd

 (C) deep

 (D) stubborn

 (E) unfounded

24. LIMBER:

 (A) wooden

 (B) skinny

 (C) sociable

 (D) supple

 (E) sober

25. TERMINATE:

 (A) end

 (B) sell

 (C) extend

 (D) renew

 (E) finalize

26. CONTEMPLATE:

 (A) reject

 (B) dominate

 (C) ponder

 (D) deserve

 (E) founder

27. CAPRICE:

 (A) mistake

 (B) whim

 (C) idea

 (D) guess

 (E) decision

28. ADAGE:

 (A) humor

 (B) permission

 (C) prevention

 (D) proverb

 (E) disdain

29. DIN:

 (A) demonstration

 (B) outline

 (C) pressure

 (D) clamor

 (E) improvement

30. EXPUNGE:

 (A) label

 (B) erase

 (C) assault

 (D) handle

 (E) keep

Part Two

Directions: Each question below is made up of a sentence with one or two blanks. One blank indicates that one word is missing. Two blanks indicate that two words are missing. Each sentence is followed by four choices. Select the one word or pair of words that will best complete the meaning of the sentence as a whole.

Example	Answer
Ann carried the box carefully so that she would not _____ the pretty glasses.	●Ⓑ©Ⓓ

(A) break

(B) fix

(C) open

(D) stop

When our boat first crashed into the rocks we

were _____, but we soon felt _____ when

we realized that nobody was hurt.

●BCD

(A) afraid; relieved

(B) happy; confused

(C) sleepy; sad

(D) sorry; angry

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31. Sun is to solar as _____.

(A) ground is to subterranean

(B) earth is to terrestrial

(C) pond is to marine

(D) planet is to lunar

(E) tower is to architectural

32. Botany is to plants as meteorology is

to _____.

(A) style

(B) weather

(C) flora

(D) health

(E) language

33. Hammer is to nail as _____.

(A) chisel is to marble

(B) nut is to bolt

(C) screwdriver is to screw

(D) lathe is to molding

(E) axe is to wood

34. Bone is to mammal as girder is to _____.

(A) crane

(B) rivet

(C) concrete

(D) steel

(E) skyscraper

35. Human is to primate as _____.

(A) dog is to pet

(B) disease is to bacterium

(C) bird is to amphibian

(D) snake is to reptile

(E) kangaroo is to vegetarian

36. Tremor is to earthquake as _____.

(A) faucet is to deluge

(B) wind is to tornado

(C) desert is to sandstorm

(D) flood is to river

(E) eye is to hurricane

37. Amusing is to uproarious as _____.

(A) humorous is to dull

(B) interesting is to mesmerizing

(C) dead is to immortal

(D) worthless is to valuable

(E) silly is to serious

38. Fickle is to steadfastness as tempestuous

is to _____.

(A) ire

(B) inspiration

(C) worthlessness

(D) openness

(E) peacefulness

39. School is to fish as _____.

(A) library is to student

(B) flock is to bird

(C) leg is to frog

(D) college is to mascot

(E) fin is to shark

40. Cartographer is to map as chef is to _____.

(A) table

(B) meal

(C) ingredient

(D) silverware

(E) flower

41. Adversity is to happiness as _____.

(A) vehemence is to serenity

(B) troublesome is to petulant

(C) solace is to sorrow

(D) graduation is to superfluous

(E) fear is to misfortune

42. Extortionist is to blackmail as _____.

(A) kidnapper is to crime

(B) businessman is to profit

(C) criminal is to arrest

(D) clerk is to stock

(E) kleptomaniac is to steal

43. Monsoon is to rain as _____.

(A) tornado is to wind

(B) famine is to drought

(C) morning is to dew

(D) sun is to spring

(E) hurricane is to destruction

44. Introspective is to withdrawn as _____.

(A) quick is to feelings

(B) introvert is to extrovert

(C) import is to export

(D) gregarious is to social

(E) hesitant is to hasty

45. Equator is to world as _____.

(A) latitude is to longitude

(B) waist is to man

(C) capital is to state

(D) fur is to animal

(E) boundary is to country

46. Superficial is to surface as _____.

(A) crust is to Earth

(B) tepid is to warm

(C) subway is to subterranean

(D) internal is to external

(E) probing is to deep

47. Stagnant is to pond as _____.

(A) oceanic is to tide

(B) flowing is to stream

(C) noisy is to sheep

(D) tidal is to wave

(E) sandy is to river

48. Sanctuary is to fortress as _____.

(A) sanction is to assassinate

(B) guns is to fort

(C) shelter is to house

(D) violent is to peaceful

(E) sanctum is to inner

49. Mentor is to professor as _____.

(A) mental is to physical

(B) tooth is to dentist

(C) child is to parent

(D) learning is to teacher

(E) advisor is to counselor

50. Lucid is to clear as _____.

(A) potent is to weak

(B) droll is to serious

(C) pensive is to hanging

(D) furtive is to clever

(E) sullen is to gloomy

51. Height is to mountain as _____.

(A) speed is to highway

(B) weight is to age

(C) mineral is to mine

(D) shade is to tree

(E) depth is to trench

52. Oblivious is to awareness as _____.

(A) invigorate is to energy

(B) erudite is to knowledge

(C) adroit is to skill

(D) serene is to composure

(E) comatose is to consciousness

53. Bellwether is to barometer as _____.

(A) embezzler is to abduct

(B) proselyte is to spark plug

(C) panhandler is to kill

(D) morass is to catalyst

(E) cynosure is to magnet

54. Act is to action as _____ .

   (A) bowl is to bowdlerize

   (B) therapy is to thermometer

   (C) oblivion is to obvious

   (D) liturgy is to literature

   (E) image is to imagine

55. Bibulous is to drink as _____ .

   (A) vegetarian is to meat

   (B) rapacious is to clothing

   (C) controversy is to reconcile

   (D) gluttonous is to food

   (E) altruistic is to money

56. Venison is to deer as veal is to _____ .

   (A) steer

   (B) calf

   (C) sheep

   (D) lamb

   (E) cow

57. Cursory is to superficial as _____ .

   (A) approbation is to consecration

   (B) death is to victory

   (C) dismal is to cheerful

   (D) heroism is to reward

   (E) desultory is to aimless

58. Bacchus is to drink as _____ .

   (A) Zeus is to Olympus

   (B) Plato is to Aristotle

   (C) Orpheus is to Eurydice

   (D) Amazon is to ruler

   (E) Diana is to hunt

59. Bald is to hairy as _____ .

   (A) broad is to fat

   (B) anemic is to robust

   (C) repetitive is to redundant

   (D) small is to tiny

   (E) fatuous is to loud

60. Gold is to Midas as _____ .

   (A) hero is to conquest

   (B) genius is to Shakespeare

   (C) devil is to Satan

   (D) bird is to eagle

   (E) wisdom is to Athena

GO ON TO THE NEXT SECTION

SECTION 3
QUANTITATIVE REASONING

Time: 35 minutes

25 Questions

Directions: Any figures that accompany questions in this section may be assumed to be drawn as accurately as possible EXCEPT when it is stated that a particular figure is not drawn to scale. Letters such as x, y and n stand for real numbers.

Each question consists of a word problem followed by four answer choices. You may write in your test booklet; however, you may be able to solve many of these problems in your head. Next take a look at the four answer choices and select the best one.

| **Example** | If $3 + x = 5$, what is the value of x? | **Answer** |
| | (A) 0 (B) 1 (C) 2 (D) 3 | Ⓐ Ⓑ ● Ⓓ |

1. What is 0.3 expressed as a percent?

   (A) 30%

   (B) 3%

   (C) 0.3%

   (D) 0.03%

   (E) 0.003%

2. What is 36 expressed as the product of prime factors?

   (A) (2)(3)

   (B) (3)(12)

   (C) (2)(2)(3)(3)

   (D) (4)(9)

   (E) (6)(6)

3. Fred invested $4,000 at a simple interest rate of 5.75%. What is the total value of his investment after three year?

   (A) $200

   (B) $230

   (C) $690

   (D) $4,230

   (E) $4,690

4. The area of a circle is the same as the area of a square whose side is 7 centimeters. The radius of the circle is closest to _____.

   (A) 25 centimeters

   (B) 3 centimeters

   (C) 3 square centimeters

   (D) 8 centimeters

   (E) 4 centimeters

5. Solve for $x: 8x - 2 = 4x + 6$

   (A) 3

   (B) -1

   (C) 4

   (D) 2

   (E) -4

6. The length of a side of a square is represented by $x + 5$, and the length of a side of an equilateral triangle is represented by $3x$. If the square and the equilateral triangle have equal perimeters, find x.

   (A) 24

   (B) 16

   (C) 12

(D) 8

(E) 4

7. A bag has five green marbles and four blue marbles. If one marble is drawn at random, what is the possibility that it is green?

(A) $\dfrac{1}{9}$

(B) $\dfrac{4}{9}$

(C) $\dfrac{5}{9}$

(D) $\dfrac{5}{20}$

(E) $\dfrac{4}{20}$

8. The expression $\sqrt{128}$ is equivalent to _____.

(A) $3\sqrt{2}$

(B) $3+\sqrt{2}$

(C) $8\sqrt{2}$

(D) $2\sqrt{2}$

(E) $8+\sqrt{2}$

9.
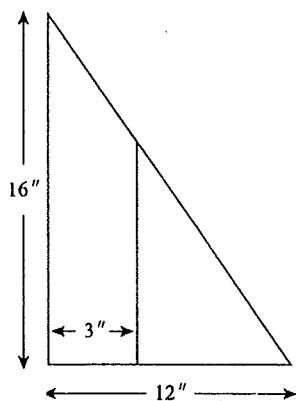
In the accompanying figure, the legs of a right triangle are 16 inches and 12 inches. Find the number of inches in the length of the line segment parallel to the 16-inch side and 3 inches from it.

(A) 16

(B) 12

(C) 9

(D) 15

(E) 10

10. On a map, 2 inches represent 12 miles. How many miles would 5 inches represent?

(A) 6

(B) 8

(C) 30

(D) $37\dfrac{1}{2}$

(E) 75

11. Of the following, 35 percent of $ 27.05 is closest to _____.

(A) $ 7

(B) $ 9.45

(C) $ 10.50

(D) $ 11.15

(E) $ 12.25

12. If a factory can make 900 nails every 3 minutes, how long would it take to make 27,000 nails?

(A) 45 minutes.

(B) 1 hour.

(C) 1 hour, 30 minutes.

(D) 2 hours, 15 minutes.

(E) 3 hours, 15 minutes.

13. Saliy has x dollars and receives $ 125 for her birthday. She then buys a bicycle thatcosts $ 100. How many dollars does Sally have remaining?

(A) $x+125$

(B) $x+100$

(C) $x+25$

(D) $x-25$

(E) $x-100$

14. If $\dfrac{A+B}{3}=5$ and A is greater than 1, which of the following could NOT be the value of B?

(A) -3

(B) 0

(C) 1

(D) 2

(E) 15

15. The average of five numbers is 10. If two of the five numbers are removed, the average of the remaining three numbers is 8. What is the sum of the two numbers that were removed?

(A) 17

(B) 18

(C) 21

(D) 22

(E) 26

16. The bottom of the shopping bag shown in Figure 4 is placed flat on a table. Except for the handles, this shopping bag is constructed with rectangular pieces of paper. Which of the following diagrams best represents all the points where the shopping bag touches the table?
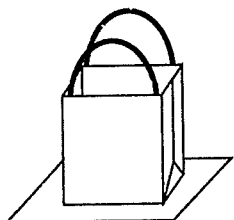
Figure 4

(A)

(B)

(C)

(D)

(E)

17. The number of students in a certain school is expected to increase from 1,050 students in 2010 to 1,470 students in 2011. What is the expected increase to

the nearest percent?

(A) 20%

(B) 33%

(C) 37%

(D) 40%

(E) 45%

18. In Figure 5, the distance between W and Y is three times the distance between W and X, and the distance between X and Z is twice the distance between X and Y. If the distance from W to X is 3, how far apart are W and Z?

(A) 10

(B) 12

(C) 15

(D) 16

(E) 18

Figure 5

19. A fence surrounds a rectangular field whose length is 3 times its width. If 400 meters of the fence is used to surround the field, what is the width of the field?

(A) 30 m

(B) 40 m

(C) 50 m

(D) 80 m

(E) 90 m

20. Ms. Kirschner receives $60 for every $900 she collects from stock sales. How much does she receive if she collects $18,000 from stock sales?

(A) $100

(B) $180

(C) $1,000

(D) $1,200

(E) $1,800

21. David walked from his home to town, a distance of 8 miles, in 1 hour. The return trip took 3 hours because he made several stops along the way. What was his average rate of speed (in miles per hour) for the entire walk?

(A) $\frac{3}{10}$ mph

(B) $1\frac{1}{2}$ mph

(C) $1\frac{2}{3}$ mph

(D) $3\frac{1}{3}$ mph

(E) 4 mph

22. 7 is to 21 as $\frac{1}{3}$ is to _____ .

(A) 3

(B) 2

(C) $\frac{4}{3}$

(D) 1

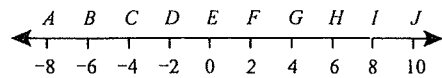(E) $\frac{5}{9}$

23. If $n=\sqrt{73}$, then _____ .

(A) $8>n>7$

(B) $n=9.5$

(C) $10>n>9$

(D) $8<n<9$

(E) $n^2>100$

24.

A   B   C   D   E   F   G   H   I   J

$-8\quad-6\quad-4\quad-2\quad0\quad2\quad4\quad6\quad8\quad10$

The sum of which points on the number line above would be equal to zero?

(A) B, D, E, I

(B) C, D, G, H

(C) A, C, F, I

(D) D, E, F, G

(E) B, C, H, I

25. How many fourths are there in $\frac{5}{3}$?

(A) $\frac{5}{24}$

(B) $\frac{5}{12}$

(C) $1\frac{1}{2}$

(D) 2

(E) $6\frac{2}{3}$

GO ON TO THE NEXT SECTION

SECTION 4

READING COMPREHENSION

Time: 35 minutes

40 Questions

Directions: This section contains eight short reading passages. Each passage is followed by several questions based on its content. Answer the questions is following a passage on the basis of what is <u>stated</u> or <u>implied</u> in that passage. You may write in your test booklet.

Passage 1

World War Ⅱ left much of Western Europe deeply scarred in many ways. Economically, it was devastated. In early 1948, as the Cold War developed between the United States and the Soviet Union and political tensions rose, U. S. policymakers decided that substantial financial assistance would be required to maintain a state of
(5)   political stability. This conclusion led the Secretary of State, George C. Marshall, to announce a proposal: the European countries were advised to draw up a unified plan for reconstruction, to be funded by the United States.

This European Recovery Program, also known as the Marshall Plan, provided economic and technical assistance to 16 countries. Between 1948 and 1952, participating
(10)   countries received a combined total of 12 billion dollars in U. S. aid. In the end, the program was seen as a great success; it revived the economies of Western Europe and set them on a course for future growth.

1. Which of the following would be the best title for this passage?
   (A) The Marshall Plan: A Program for European Reconstruction.
   (B) The Economic Destruction of Europe.
   (C) George C. Marshall: The Man Behind the Plan.
   (D) Western European Recovery.
   (E) The Aftermath of World War Ⅱ.

2. The tone of the author toward the Marshall Plan is _____.
   (A) excited   (B) anxious   (C) unfavorable
   (D) insistent   (E) objective

3. All of the following are true about the Marshall Plan EXCEPT _____.
   (A) it supplied economic aid for a period spanning four years
   (B) it gave each of the participating countries 12 billion dollars
   (C) it went into action in 1948
   (D) it was considered a great long-term success
   (E) it provided economic assistance to 16 countries

4. The passage suggests that the driving force behind the Marshall Plan was _____ .

   (A) a joint U. S. Soviet agreement to assist the countries of Western Europe

   (B) George C. Marshall's desire to improve his political career and public image

   (C) fear of economic repercussions for the U. S. economy

   (D) the increase in tension between the United States and the Soviet Union

   (E) a formal request for aid by European leaders

5. Which of the following would the author be most likely to discuss next?

   (A) Other successful economic recovery programs employed throughout history.

   (B) How George C. Marshall became the U. S. Secretary of State.

   (C) The events leading up to Western Europe's economic collapse.

   (D) The detailed effects of the Marshall Plan on specific countries.

   (E) Developments in the Cold War during and after the years of the Marshall Plan.

Passage 2

   During the 15th century, the Belgian city Bruges was the most important
commercial city in the north of Europe. Like Florence in Italy, Bruges derived its
wealth from wool and banking. Ships brought raw wool there from England and Spain,
and carried away finished wool cloth, which was celebrated throughout Europe.
(5)   Bankers came to Bruges on the heels of the wool merchants—among them,
representatives of the House of Medici. Soon Bruges became the financial center for all
of northern Europe. Merchants from Italy, the Near East, Russia, and Spain all
congregated in Bruges. Even though nearby cities such as Ghent and Louvain also
flourished, Bruges so outshone them in prosperity that the Duke of Burgundy made that
(10)   city his capital and moved his court there in the early 15th century.

6. As it is used in line 2, the word "derived" most nearly means _____ .

   (A) invested   (B) obtained   (C) traveled

   (D) exchanged   (E) created

7. It can be inferred from the text that the arrival of representatives of the House of Medici in
   Bruges _____ .

   (A) required the city to provide official translators

   (B) secured the status of Bruges as an important financial center

   (C) lowered the level of market activity in Bruges

   (D) increased the amount of raw wool brought to Bruges

   (E) improved the quality of life for all residents of Bruges

8. It can be inferred from the text that the wool brought to Bruges _____ .

   (A) was also sent to rival towns Ghent and Louvain

   (B) was woven into cloth, and shipped throughout Europe

   (C) was as valuable as gold and other precious metals

(D) was not instrumental in Bruges' growth as a financial center

(E) was of the best quality available in northern Europe

9. The author most likely mentions "merchants from Italy, the Near East, Russia, and Spain" in order to _____.

(A) portray the peaceful cooperation of European countries

(B) illustrate the variety of merchants involved in the wool trade

(C) convey the excitement of Europe in the 15th century

(D) demonstrate how successful Bruges became

(E) indicate the poverty of trade in those countries

10. According to the text, why did the Duke of Burgundy choose Bruges over Ghent and Louvain as the site of his court?

(A) More painters and musicians lived in Bruges than in other cities.

(B) Ghent was on the verge of a financial crisis.

(C) Ghent and Louvain were too far away from Burgundy.

(D) Bruges was unquestionably the most wealthy city.

(E) Bruges produced a higher quality of wool fabric.

11. Which of the following best states the main idea of the passage?

(A) Wool and banking made Bruges the commercial center of northern Europe.

(B) The growth of the wool trade transformed commerce in the Renaissance.

(C) Most 15th-century cities centered around banking and wool manufacture.

(D) Tired of his court in France, the Duke of Burgundy moved to Bruges.

(E) Bruges outshone Florence in prosperity and cultural diversity.

12. All of the following are reasons why Bruges was an important city EXCEPT _____.

(A) its status as the Belgian capital made it a commercial center

(B) its prosperity brought prosperity to other cities

(C) it became the heart of banking in the region

(D) it was a central meeting place for foreign merchants

(E) it provided a venue for wool traders to exchange merchandise

Passage 3

Tea is consumed by more people and in greater amounts than any other beverage in the world, with the exception of water. The tea plant, from whose leaves tea is made, is native to India, China, and Japan and was first cultivated for use by the Chinese in prehistoric times. The plant, which is characterized as an evergreen, can reach a
(5)   height of about thirty feet but is usually pruned down to three or four feet for cultivation, It has dark green leaves and cream-colored, fragrant blossoms.
        Cultivation of the tea plant requires a great deal of effort. The plant must grow in a warm, wet climate, in a carefully protected, well-drained area. Its leaves must be picked by hand. (Cultivation in North America has been attempted, but was found to be
(10)   impractical because of a shortage of cheap labor.) Today, the plant is cultivated in the

lands to which it is native, as well as in Sri Lanka, Indonesia, Taiwan, and South America.

　　Tea was probably first used as a vegetable relish and for medicinal purposes. In the 1400s Chinese and Japanese Buddhists developed a semi-religious ceremony surrounding
(15)　tea-drinking. It was not until after 1700, however, that it was first imported into Europe. Today, the United Kingdom imports more tea than does any other nation—almost one third of the world's production. The United States is also a large importer, but Americans have seemed to prefer coffee ever since the famous Boston Tea Party in 1773.

13. This passage is mainly about _____.
　　(A) tea-drinking throughout history
　　(B) the tea plant
　　(C) the tea trade
　　(D) the cultivation of the tea plant
　　(E) the uses of the tea plant

14. According to the passage, the tea plant _____.
　　(A) requires well-drained soil to grow properly
　　(B) is the largest import of the United Kingdom
　　(C) was first cultivated in Japan in prehistoric times
　　(D) is native to South America
　　(E) has odorless flowers

15. Why is a large supply of cheap labor important for the cultivation of tea?
　　(A) Since England and China are far away from each other, many workers are required to coordinate tea shipments and deliveries.
　　(B) Since the tea plant is hand picked, many laborers are needed at harvest time.
　　(C) Since the tea plant can reach a height of thirty feet, several workers are required to harvest each plant.
　　(D) Since tea is exported all over the world, a lot of people are needed to handle the trade complications that arise.
　　(E) Since tea has been around since prehistoric times, many workers are employed to protect it and ensure that it doesn't die out.

16. The style in the passage is most like that found in a _____.
　　(A) history textbook
　　(B) journal entry
　　(C) newspaper article
　　(D) passage in an encyclopedia
　　(E) cookbook

17. Which of the following is the author most likely to discuss next?
　　(A) Current trends in tea consumption.
　　(B) A description of what China was like in prehistoric times.
　　(C) Other major imports of the United Kingdom and United States.

(D) The details and aftermath of the Boston Tea Party.

(E) Other examples of plants that have a medicinal value.

18. The purpose of the second paragraph is to _____.

(A) discuss historical uses of tea

(B) describe the cultivation of tea

(C) question the importance of tea

(D) describe the role of tea in religious ceremonies

(E) explain why Americans prefer coffee

Passage 4

When you buy a house plant, if the plant is healthy, it is likely to grow successfully in your home. How do you decide if a plant is sound? First, look at the leaves. If they are brown at the edges, the plant has been given too much fertilizer or has been kept in temperatures that are too warm for its species. If the leaves are pale or yellow, the

(5)   plant has been given too much or too little water. If the leaves are very far apart from each other on the stem, this may mean the plant has been pushed to grow abnormally fast, and new leaves will not grow to fill in the gaps. You should look for a plant whose foliage is dense.

After checking the leaves' general appearance, look carefully at the underside of

(10)   the leaves and the places where the leaves join the stem for evidence of insects. Because the insects that infest house plants are very tiny, it may be hard to see them. But they leave clues that they are living on the plant. Some secrete a shiny sticky substance called honeydew on the plant. Others leave behind tiny fine white webs.

Finally, check to see if the plant's roots are growing out through the drainage hole

(15)   in the bottom of the pot. If the roots are growing through the hole, the plant has outgrown its pot, and it may not be the larger container.

19. If a plant has been given too much fertilizer, _____.

(A) there will be tiny webs on the leaves

(B) its leaves may have brown edges

(C) the foliage will be dense

(D) the soil will appear dry

(E) its leaves may be yellow

20. To check a plant's health, examine _____.

(A) leaf density   (B) the bottom of the pot   (C) the stem

(D) leaf color   (E) All of the above

21. In context, "infest" most likely means _____.

(A) live on   (B) grow from   (C) secrete

(D) infect   (E) eat

22. Too much or too little water will cause _____.

(A) large gaps between the leaves

(B) yellow or pale leaves

(C) roots to grow out of the drainage hole

(D) shiny spots on the stem

(E) dark-colored foliage

23. Based on this passage, a reader can infer that _____.

(A) some plants for sale have not been cared for properly

(B) it is difficult to care for a plant at home

(C) a plant's health is based on its environment

(D) plants are forced to grow abnormally fast

(E) all growers of plants for sale raise them in perfect conditions

Passage 5

Is Earth flat or round? Until 1522, most people believed Earth was flat. In that year one of Magellan's ships completed the first trip all the way around Earth. Long before scientists thought that Earth was shaped like sphere, so the earth scientists said that Earth is spherical.

(5)   The spherical model of Earth is based on such evidence as the following:

The mast of a ship was the first part to appear over the horizon. It was the last part to disappear. The traditional cry of the lookout in a sailing vessel is, "I see a mast."

When ships sailed north or south, sailors observed that the nighttime sky changed

(10)   in appearance. The North Star rose higher in the sky as they sailed northward. It sank in the sky as they sailed southward. The position of the North Star changed so gradually and so evenly that it could only be explained in one way. The ship was sailing on a spherical surface. When ships sailed far enough south, constellations such as the Big Dipper could no longer be seen, but new ones such as the Southern Cross appeared in

(15)   the sky. Would this be true on a flat Earth?

An eclipse of the moon occurs when Earth's shadow falls on the moon. During an eclipse of the moon, the edge of Earth's shadow as it moves across the moon is always the arc of a circle. Only a sphere casts a circular shadow, no matter what position it is in.

(20)   The evidence listed above is, of course, still visible today, although a lookout is much more likely to see a smokestack than a mast. But now everyone can see the evidence. Many photographs of Earth have been taken by orbiting spacecraft. Other photographs of Earth have been taken from the moon by the Apollo astronauts.

24. In the context of the passage, the word "constellation" most likely means _____.

    (A) a pattern of stars   (B) the Big Dipper   (C) a number of spheres

    (D) the North Star   (E) a group of planets

25. When a ship sails north, the North Star _____.

    (A) changes shape

    (B) becomes the Southern Cross

    (C) rises higher in the sky

    (D) sinks lower in the sky

    (E) stays in the same place in the sky

26. In the paragraph describing an eclipse of the moon, we can infer that the _____.

    (A) earth is in shadow

    (B) moon has an orbit

    (C) earth is spherical

    (D) moon is closer to the earth than the sun

    (E) earth is flat

27. The title that best expresses the idea of this passage is _____.

    (A) "The Earth Is Spherical"

    (B) "Science Has All the Answers"

    (C) "The Meaning of a Lunar Eclipse"

    (D) "What We Need from the Moon"

    (E) "Magellan's Trip Around the World"

28. The deduction that the earth is round is based on all of the following EXCEPT the _____.

    (A) observations of constellations

    (B) observations of eclipse

    (C) observations of sailors

    (D) observations of astronauts

    (E) observations of philosophers

Passage 6

    The police department of New York City has one branch that many do not know about, although it was established almost a century ago. This is the harbor precinct's 14-boat fleet of police launches, which patrols 578 miles of waters around the city, paying particular attention to the areas containing 500 piers and some 90 boat clubs.

(5)   The boats are equipped for various jobs. One boat is an ice-breaker; another is equipped to render aid in the event of an airplane crash at La Guardia Airport. All of the boats are equipped with lifeline guns, heavy grappling irons to raise sunken automobiles, and lasso-sticks to rescue animals in the water. They have power pumps to bail out sinking craft, first-aid kits, extra life preservers, signal flags, and searchlights.

(10)   The force of 183 officers have all had previous experience with boats. Some of the officers are Navy and Coast Guard veterans. Many of the harbor police officers have

ocean-going Master's or Harbor Captain's licenses. All are highly trained in the care and handling of engines and in navigation. All are skilled in giving first aid, and each officer is a qualified radio operator and a trained marks-man with a revolver.

(15)   The work of the police includes many tasks. One duty of this force is to check the operation of the fleet of 43 junk boats that ply their trade in the harbor, buying scrap, rope, and other items for resale ashore. These boats could just as easily be used to smuggle narcotics, gems, aliens, or spies into the country, so they are watched closely by the city's harbor police force. During the last summer, the police launches towed

(20)   450 disabled boats and gave some kind of help to thousands of others. The officers also arrest those who break navigation laws or who endanger the safety of bathers by approaching too near the shore in speed boats.

29. The harbor police were _____.
    (A) in full force almost 100 years ago
    (B) in use before the Civil War
    (C) first used in the twentieth century
    (D) introduced by order of the mayor
    (E) introduced by veterans of World War II

30. The boats used _____.
    (A) are all equipped with deck guns
    (B) are uniform in design
    (C) vary in function
    (D) can all serve as ice-breakers
    (E) work at Kennedy Airport

31. The harbor police _____.
    (A) ensure legal traffic in junk
    (B) arrest any man found on a junk boat
    (C) regulate disabled boats
    (D) prevent the resale of scrap material
    (E) regulate the admission of spies

32. Their services include _____.
    (A) first aid, the rescue of animals, and fire patrol
    (B) towing, life-saving, and salvage
    (C) ice-breaking, the collection of junk, and the transportation of aliens
    (D) smuggling, first aid, and rescue
    (E) customs collection, towing, and the sending of radio messages

33. The police boats _____.
    (A) unload ships at the piers
    (B) assist boats of all kinds
    (C) cannot detain other boats
    (D) have no responsibility for bathers
    (E) warn offenders but do not make arrests

Passage 7

The term "genetic modification" refers to technology that is used to alter the genes of living organisms. Genetically modified organisms are called "transgenic" if genes from different organisms are combined. The most common transgenic organisms are crops of common fruits and vegetables, which are now grown in more than fifty
(5)   countries. These crops are typically developed for resistance to herbicides, pesticides, and disease, as well as to increase nutritional value. Some of these transgenic crops currently under development might even yield human vaccines. Along with improving nutrition and alleviating hunger, genetic modification of crops may also help to conserve natural resources and improve waste management.

34. The primary purpose of the passage is to _____.
    (A) establish that transgenic crops are safe
    (B) provide information about transgenic crops
    (C) critique the process of genetic modification
    (D) praise the virtues of genetically modified foods
    (E) overcome opposition to genetically modified foods

35. In line 7, the word "yield" most nearly means to _____.
    (A) surrender   (B) drive slowly   (C) replace
    (D) back down   (E) produce

Passage 8

As he threw his head back in the chair, his glance happened to rest upon a bell, a disused bell, that hung in the room and communicated, for some purpose now forgotten, with a chamber in the highest story of the building. It was with great astonishment, and with a strange *inexplicable* dread, that, as he looked, he saw this
(5)   bell begin to swing. Soon it rang out loudly, and so did every bell in the house.

This was succeeded by a clanking noise, deep down below as if some person were dragging a heavy chain over the casks in the wine merchant's cellar. Then he heard the noise much louder on the floors below; then coming up the stairs; then coming straight toward his door.

(10)   It came in through the heavy door, and a *specter* passed into the room before his eyes. And upon its coming in, the dying flame leaped up, as though it cried, "I know him! Marley's ghost!"

—from *A Christmas Carol* by
Charles Dickens

36. The word *inexplicable* means _____ .
    (A) without an expressed reason
    (B) incapable
    (C) not able to be taken out of
    (D) explaining in simple terms
    (E) eerie

37. The bell that began ringing _____ .
    (A) could be rung from another room
    (B) was attached to every bell in the house
    (C) rested first on his glance
    (D) was large and heavy
    (E) did so by itself

38. The man who was listening to the bell _____ .
    (A) was apparently very frightened
    (B) was quite curious
    (C) was Marley's ghost
    (D) dragged a chain across the wine casks
    (E) sat perfectly still

39. The word *specter* probably means _____ .
    (A) clanking chains
    (B) a hazy, recognizable vision
    (C) strange noises
    (D) a long-handled sword
    (E) a bright light

40. The man in the story _____ .
    (A) recognized Marley's ghost
    (B) had been asleep
    (C) set the room on fire
    (D) first heard noises in his room
    (E) is probably a wine merchant

SECTION 5

MATHEMATICS ACHIEVEMENT

Time: 40 minutes

25 Questions

Directions: Each question is followed by four suggested answers. Read each question and then decide which one of the four suggested answers is best.

Find the row of spaces on your answer document that has the same number as the question. In this row, mark the space having the same letter as the answer you have chosen. You may write in your test booklet.

Example	Answer
$(5 + 3) - 2 =$	●ⒷⒸⒹ
(A) 6	
(B) 8	
(C) 10	
(D) 13	
The correct answer to this question is lettered A, so space A is marked.	

1.
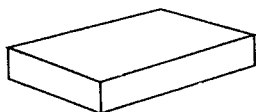
A unit block for construction is $1 \times 2 \times 3$ inches. What is the number of whole blocks required to cover an area 1 foot long by $1 \frac{1}{4}$ feet wide with *one layer* of blocks?

(A) 30 blocks

(B) 60 blocks

(C) 72 blocks

(D) 90 blocks

(E) 180 blocks

2. If the number of square inches in the area of a circle is equal to the number of inches in its circumference, the diameter of the circle is _____.

(A) 4 inches

(B) 2 inches

(C) 1 inch

(D) π inches

(E) 2π inches

3. The least common multiple of 28, 24 and 32 is _____.

(A) 240

(B) 480

(C) 672

(D) 1,920

(E) 15,360

4. If $9x + 5 = 32$, the numerical value of $18x + 5$ is _____.

(A) 59

(B) 41

(C) 38

(D) 36

(E) 32

6

5. When the fractions $\frac{2}{3}$, $\frac{5}{7}$, $\frac{8}{11}$ and $\frac{9}{13}$ are arranged in ascending order of size, the result is _____ .

   (A) $\frac{8}{11}, \frac{5}{7}, \frac{9}{13}, \frac{2}{3}$

   (B) $\frac{5}{7}, \frac{8}{11}, \frac{2}{3}, \frac{9}{13}$

   (C) $\frac{2}{3}, \frac{8}{11}, \frac{5}{7}, \frac{9}{13}$

   (D) $\frac{2}{3}, \frac{9}{13}, \frac{5}{7}, \frac{8}{11}$

   (E) $\frac{9}{13}, \frac{2}{3}, \frac{8}{11}, \frac{5}{7}$

6. If a cubic inch of a metal weighs 1 pounds, a cubic foot of the same metal weighs _____ .
   (A) 8 pounds
   (B) 24 pounds
   (C) 96 pounds
   (D) 288 pounds
   (E) 1,728 pounds

7. A micromillimeter is defined as one millionth of a millimeter. A length of 170 micromillimeters may be represented as _____ .

   (A) 0.00017 mm
   (B) 0.000017 mm
   (C) 0.0000017 mm
   (D) 0.00000017 mm
   (E) 0.000000017 mm

8. To find the radius of a circle whose circumference is 30 inches, _____ .
   (A) multiply 60 by π
   (B) divide 60 by 2π
   (C) divide 30 by 2π
   (D) divide 60 by π and extract the square root of the result
   (E) multiply 60 by $\frac{\pi}{2}$

9. A carpenter needs four boards, each 3 feet 9 inches long. If wood is sold only by the foot, how many feet must he buy?
   (A) 9
   (B) 10

(C) 11
(D) 12
(E) 15

10. The approximate distance, S, in feet that an object falls in t seconds when dropped from a height can be found by using the formula $S = 16t^2$. In 4 seconds the object will fall _____ .
    (A) 256 feet
    (B) 1,024 feet
    (C) 1,084 feet
    (D) 2,048 feet
    (E) 15,384 feet

11. If x is a positive number and $y = \frac{1}{x}$, as x increases in value, what happens to y?
    (A) y increases.
    (B) y decreases.
    (C) y is unchanged.
    (D) y increases then decreases.
    (E) y decreases then increases.

12. A box was made in the form of a cube. If a second cubical box has inside dimensions four times those of the first box, how many times as much does it contain?
    (A) 3
    (B) 9
    (C) 12
    (D) 27
    (E) 64

13. Mr. Adams has a circular flower bed with a diameter of 4 feet. He wishes to increase the size of this bed so that it will have nine times as much planting area. What must be the diameter of the new bed?
    (A) 6 feet
    (B) 8 feet
    (C) 12 feet
    (D) 16 feet
    (E) 20 feet

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14. A train left Albany for Buffalo, a distance of 290 miles, at 10:10 a.m. The train was scheduled to reach Buffalo at 3:53 p.m. If the average rate of the train on this trip was 50mph, it arrived in Buffalo _____.
   (A) about 5 minutes early
   (B) on time
   (C) about 5 minutes late
   (D) about 13 minutes late
   (E) more than 15 minutes late

15. If $3x - 2 = 13$, the value of $6x + 20$ is _____.
   (A) 5
   (B) 20
   (C) 30
   (D) 50
   (E) 80

16. A bakery shop sold three kinds of cake. The prices of these were 25¢, 30¢ and 35¢ per pound. The income from these sales was $18. If the number of pounds of each kind of cake sold was the same, how many pounds were sold?
   (A) 120 pounds
   (B) 90 pounds
   (C) 60 pounds
   (D) 45 pounds
   (E) 36 pounds

17. How many more $9'' \times 9''$ linoleum tiles than $1' \times 1'$ tiles will it take to cover a $12' \times 12'$ floor?
   (A) 63
   (B) 98
   (C) 112
   (D) 120
   (E) 144

18. If p pencils cost c cents, n pencils at the same rate will cost _____.
   (A) $\frac{pc}{n}$ cents
   (B) $\frac{cn}{p}$ cents
   (C) npc cents
   (D) $\frac{np}{c}$ cents
   (E) $n + p + c$ cents

19. Which, if any, of the following statements is always true?
   (A) If the numerator and denominator of a fraction are increased or decreased by the same amount, the value of the fraction is unchanged.
   (B) If the numerator and denominator of a fraction are squared, the value of the fraction is unchanged.
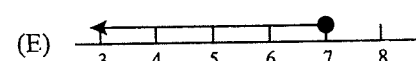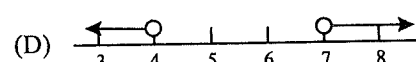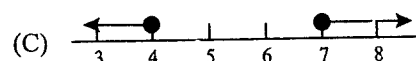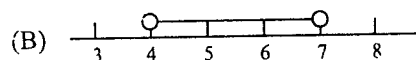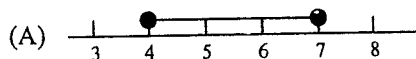   (C) The square of any number is greater than that number.
   (D) If unequal quantities are added to unequal quantities, the sums are unequal.
   (E) None of the above.

20. If the length and width of a rectangle are each doubled, by what percent is the area increased?
   (A) 50%
   (B) 75%
   (C) 100%
   (D) 300%
   (E) 400%

21. What is the graph of the inequality $4 \leqslant x \leqslant 7$?
   (A)
   (B)
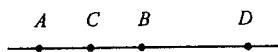   (C)
   (D)
   (E)

22. $13^2 - 12^2 =$ _____.
   (A) 2
   (B) 4

(C) -4

(D) 40

(E) 25

23. Eric's test scores were 96, 93, 86, 100 and 94. What would he need on his next test to have an average of 93?

(A) 89

(B) 92

(C) 95

(D) 100

(E) It is not possible to get that average.

24. Where does the line $y = x - 5$ cross the y-axis?

(A) (0,5)

(B) (0, -5)

(C) (-5,0)

(D) (-5,5)

(E) (0,0)

25.

$$\begin{array}{cccc} A & C & B & D \end{array}$$

If points A, B, C and D are distinct collinear points, and $\overline{AC}$ is congruent to $\overline{BC}$, and B lies between A and D, and the length of $\overline{AC}$ is 7, what is the length of $\overline{CD}$?

(A) 7

(B) 14

(C) 21

(D) 28

(E) It cannot be determined.

SECTION 1: WRITING THE ESSAY

I can understand why some schools require students to maintain their grades if they want to be in sports. Sports are time consuming and cut into study time. But, I think that less competent students should not be deprived of the benefits of sports participation.

The argument that students should keep up their grades if they want to be in sports is worth listening to. After all, the purpose of going to school is to get an education. And sports practice and games do take a lot of time. The grades of a few students might in fact suffer from sports participation. But I think that more students will work harder and will learn to manage time better if they are allowed to play on the team. Learning to organize time is also an important lesson to be gained from school. Happy people tend to reach to meet expectations, and less capable students may even do better in school to prove that being in sports did not do them any harm.

An equally good argument is that everyone must succeed at something. If a poor student can excel at sports, that student will develop selfesteem. Once that student feels good about himself or herself, the student may transfer that confidence to schoolwork and actually get better grades. The old adage that success breeds success applies here.

While the attitude that schoolwork comes first does make a good point, I think that permitting a student to participate in sports and to develop a good self-image is more important. The school should give extra help to the less competent student, especially help in learning time management. Then it should let that student contribute to school spirit on the playing fields as well as in the classroom.

SECTION 2: VERBAL REASONING

1. C

   Evasion is subterfuge or avoidance. His manner of evasion of embarrassing questions was to make a long speech on another topic.

2. A

   That which is indispensable cannot be dispensed with, that is, it is absolutely essential. The president of the company refused to take a vacation because he had the mistaken notion that his presence was indispensable.

3. D

   To obliterate is to destroy without leaving a trace. The washing waves obliterated our footsteps in the sand.

4. A

   Amiable means pleasant, friendly, and good-natured. The amiable shop-keeper allowed us to continue trying on shoes even though it was already past closing time.

5. A

To writhe is to twist, squirm, or contort, usually in discomfort. The skier writhed in pain when she broke her ankle.

6. E

To abate is to diminish. We will stay tied up in port until the winds abate.

7. D

An endorsement is a statement of approval. The governor gave his endorsement to the candidate for mayor of the city.

8. A

To convert is to change from one form to another. Use a transformer to convert DC current to AC current.

9. B

Erudite means learned or scholarly. He has little information, but his beautiful command of the English language makes him appear to be erudite.

10. C

To endeavor is to attempt or to try. The expedition endeavored to reach the mountaintop before the thunderstorm.

11. A

Battery is a collection of related things intended for use together. A battery of new computers will arrive in our supermarket soon.

12. B

Being patient means enduring without protest or complaint. As a teacher, you should be patient to the students.

13. E

Painstaking means being characterized by extreme care and great effort. She is not very clever but she is painstaking.

14. E

Prelude is something that serves as a preceding event or introduces what follows. That is prelude to China's rapid economic growth.

15. E

Reverence means a reverent attitude. The old man attained great reverence from the young men.

16. D

Unusual means being definitely out of the ordinary. This is unusual in modern American history.

17. E

Noise means sound of any kind, especially the unpleasant. What type of noise pollution do you hate most?

18. D

To express is to indicate what you mean by some words. Express your interest if you want the relationship to progress.

19. B

Being kind means showing a considerate and helpful nature. She is a very kind conductor.

20. E

Clandestine means being conducted with or marked by hidden aims or methods. Jone's clandestine meeting with government officials had been secretly recorded.

21. D

To prevail means to win, overcome, or triumph.

22. B

To prance is to walk in a cocky way or to strut. The closest wrong answer choice, in attitude at least, is (D), but boasting is not a way of walking.

23. C

Profound means deep-seated or intense. A parent has a profound love for his child.

24. D

Limber means flexible, lithe, nimble, or supple. (A), wooden, is a good antonym for limber.

25. A

To terminate means to finish or bring to an end.

26. C

To contemplate means to think about or ponder.

27. B

A caprice is a sudden fancy or whim. (C) is tempting, but not all ideas are whims or caprices.

28. D

An adage is a common saying or proverb.

29. D

A din is a loud, confused mixture of noises—in other words, a clamor.

30. B

To expunge is to get rid of, obliterate, erase.

31. B

Anything having to do with the sun is solar. In the same way, anything having to do with the earth is terrestrial, (B). Marine refers to a sea or ocean, not to a pond. Subterranean refers to what is below the ground, not to the ground itself. You might suspect (D), but lunar refers to anything having to do with the moon, not planets.

32. B

Botany is the study of plants. Similarly, meteorology is the study of weather, (B). Flora is the generic word for plant life or vegetation.

33. C

You use a hammer to put in a nail. In the same way, you use a screwdriver to put in a screw, (C). You use an axe to chop wood, a lathe to smooth or shape molding; a chisel to chip marble, and a nut to secure a bolt.

34. E

A bone is part of the structural system that supports a mammal. A girder is part of the structural system that supports a skyscraper, (E). The other choices are also part of the structural system that supports a skyscraper, not the skyscraper itself.

35. D

A primate is an order of mammals that includes monkeys, apes, and humans. So a human is one species of the primate order, just as a snake is one species of the order of reptiles. Vegetarians are not an order in the same way as primates and reptiles. A disease is not necessarily bacterial in nature. Birds are mammals, not amphibians; amphibians are a class in the animal kingdom that includes frogs and toads.

36. B

A tremor is a quivering motion of the earth. A powerful tremor may be an earthquake. In the same way, wind is a motion of the air, and a powerful wind may be a tornado, (B). The analogy isn't exact here, but it's better than the other choices. An eye is the calm center of a hurricane (E); a powerful desert is not a sandstorm (C). A faucet is a manmade object through which water flows; a deluge (A) is a great flood. And a powerful flood (D) is not a river.

37. B

Something tremendously amusing is uproarious; similarly, something tremendously interesting is hypnotic, fascinating, or mesmerizing, (B).

38. E

Being fickle, or inconstant, is the opposite of steadfastness. In the same way, being tempestuous, or stormy, is the opposite of peacefulness, (E). Ire, (A), means anger.

39. B

A group of fish is called a school, just as a group of birds is called a flock.

40. B

A cartographer is a designer of maps, just as a chef is a designer of meals.

41. A

This analogy is best understood as a negative cause and effect. Adversity leads to a lack of happiness; vehemence leads to a lack of serenity.

42. E

The relationship is that of actor to action. An extortionist blackmails; a kleptomaniac steals.

43. A

This is a whole-to-part relationship. A monsoon is a major storm of which rain is a crucial component; a tornado is a major storm of which wind is a crucial component.

44. D

The relationship between the two sets of words is that the words in each half of the analogy are synonyms. Don't worry that the words in the first half are antonyms of the second. You aren't looking at how all four words relate to one another in this analogy, just at how the words in each half relate to one another.

45. B

You needn't categorize an analogy; you only need to understand it. The equator is the midline that circles the world; the waist is the midline that circles the man.

46. E

On each side of the analogy, the first term is a characteristic of the second.

47. B

This analogy is based on characteristics of bodies of water. A pond may be stagnant; a stream is likely to flow. Sheep may be noisy but since there are two choices that involve characteristics, you must choose the one that is closest in other aspects to the first set of terms, that is, the one involving water.

48. C

This is a purposeful or functional relationship. A fortress gives sanctuary; a house gives shelter.

49. E

The terms are synonyms.

50. E

This analogy is also based on synonyms. Choice (B) is incorrect because pensive means thoughtful. If you made this choice, you were mistaking pensive for pendant, which does mean hanging.

51. E

One of the characteristics of a mountain is its height. One of the characteristics of a trench is its depth. Choice (D) will not work. While shade is often a characteristic of a tree, it is not a persistent characteristic, meaning that a tree does not always give shade. In addition, a mountain possesses height, but a tree GIVES shade. Choice (A) is incorrect; a characteristic of age is not always weight. The relationship is not the same as height and mountain. Choice (B) is incorrect; while we often associate speed with a high-way, speed is not a characteristic of the highway. Choice (C) is incorrect; while a mineral comes from a mine, it is not a characteristic of the mine. It is a product of the mine. The relationship is not the same as height and mountain.

52. E

Someone who is oblivious lacks awareness. The relationship is words to antonyms or opposites. Choice (D) is incorrect. The

relationship here is synonyms. One who is serene is composed. Choice (B) is incorrect. Again, the relationship is synonyms. One who is erudite possesses knowledge. Choice (C) is incorrect; one who is adroit possesses skill. The relationship is synonymous. Choice (A) is incorrect; the relationship is that of synonyms. One who is invigorated possesses energy.

53. E

A cynosure functions as a magnet. A cynosure is the center of attention, or a magnet; a magnet attracts attention. The relationship is object to its function. A bellwether is a barometer. Choice (B) is incorrect; a proselyte does not function as a spark plug. Choice (C) is incorrect; a panhandler does not kill. Choice (A) is incorrect; an embezzler does not abduct. Choice (D) is incorrect; a morass (swamp) does not function as a catalyst (leavening).

54. E

The relationship is word and derived form. The word "action" derives from the word "act". Choice (B) is incorrect; thermometer (temperature measure) does not derive from the word "therapy". There is no relationship. Choice (C) is incorrect; the relationship is antonyms or opposites. Oblivion means forgotten and obvious means apparent. The relationship is different. Choice (D) is incorrect; Liturgy (ritual) does not provide the root for the word "literature", which means a body of work. Choice (A) is incorrect; bowl (goblet) does not form the root for bowdlerize, which means to modify. There is no relationship.

55. D

The relationship is object to its function. One who is bibulous consumes more

drink than is advisable. Choice (D) is the correct answer because one who is gluttonous consumes more food than is advisable. Choice (B) is incorrect; rapacious (taken by force) has no relationship to clothing. Choice (E) is incorrect; one who is altruistic (concerned for the welfare of others) would not have more money than was advisable. The relationship is not the same. Choice (A) is incorrect. A vegetarian would not consume more meat than advisable. Choice (C) is incorrect; controversy and reconcile have the relationship of opposites.

56. B

Venison is the meat of a deer. The relationship is part to whole. Veal is the meat of a calf. Choices (A), (C), (D) and (E) are incorrect because although they are animals from which we get meat, we do not get veal from any of them.

57. E

Cursory and superficial are both adjectives and are synonyms—they have the same meaning. Choices (A), (B) and (C) are incorrect because the answers, while both adjectives, are antonyms—they have opposite meanings. Choice (D) is incorrect because the relationship is cause to effect.

58. E

Bacchus is the god of wine; Diana is the goddess of the hunt. This is a worker and creation relationship. Choice (C) is incorrect because both Orpheus and Eurydice are mythological gods. Choices (A) and (D) are incorrect because the relationship is unclear. Choice (B) is incorrect because the relationship is item to category.

59. B

Bald and hairy are antonyms. Anemic and robust are antonyms. Choices (C)

and (D) are incorrect because the words are synonyms. Choices (A) and (E) are incorrect because the words are not related specifically.

60. E

Gold was important to Midas; wisdom was important to Athena. The relationship is worker and creation. Choices (A) and (D) are incorrect because the relationship is item to category. Choice (C) is incorrect because the relationship is synonymous. Choice (B) is incorrect because the relationship is type to characteristic.

SECTION 3: QUANTITATIVE REASONING

1. A

To rename a decimal as a percent, multiply the decimal by 100.

$$0.3 \times 100 = 30.00 = 30\%$$

2. C

A prime number is a number that is divisible by itself and by 1. Hence, $36 = 4 \times 9 = 2 \times 2 \times 3 \times 3 \to 2$ and 3 are prime numbers.

3. E

First find the amount of interest.

$$I = P \times R \times T$$
$$= \$4,000 \times 0.0575 \times 3 = \$690$$

Add the amount of interest to the original amount to get the total amount after three years.

4. E

First find the area of the square.

$$A = s^2$$
$$= 7^2 = 49 \text{ sq. cm.}$$

Then, use the formula: $A = \pi r^2$

$$49 \approx (3.14) r^2$$
$$15.61 \approx r^2$$
$$\sqrt{15.61} \approx r$$
$$3.95 \text{ cm} \approx r$$

5. D

Combine like terms by additive inverse:

$$8x - 2 = 4x + 6$$
$$-4x + 2 = -4x + 2$$
$$\overline{\qquad 4x = 8 \qquad}$$

Divide 8 by 4.

$$x = 2$$

6. E

The perimeter of the square = $4s$.

$$P = 4s = 4(x + 5) = 4x + 20$$

The perimeter of the equilateral triangle is $3s$.

$$P = 3s = 3(3)x = 9x$$
$$4x + 20 = 9x$$
$$20 = 5x$$
$$4 = x$$

7. C

There are 5 marbles that are green out of a total of 9 marbles, so $\frac{5}{9}$.

8. C

Find two factors of 128, one of which is a perfect square.

$$\sqrt{128} = \sqrt{64 \times 2}$$
$$= \sqrt{64}\sqrt{2} \text{ (simplify perfect square)}$$
$$\sqrt{64} = 8$$
$$\sqrt{128} = 8\sqrt{2}$$

9. B

If a line is parallel to one side of a triangle and intersects the other two sides, the line divides those sides proportionately.

$$\frac{16}{12} = \frac{x}{9}$$
$$12x = (16)(9)$$
$$12x = 144 \text{ and } x = 12$$

10. C

This problem can very easily be solved using a proportion:

$$\frac{2 \text{ inches}}{12 \text{ miles}} = \frac{5 \text{ inches}}{x \text{ miles}}$$

After cross-multiplication, this proportion becomes

$$2x = 60$$
$$x = 30$$

11. B

Round $ 27.05 to 27.00. Then we have $\frac{35}{100} \times 27 = ?$ Canceling yields $\frac{7}{20} \times 27 = \frac{189}{20} = 9.45$.

12. C

Let T be the number of minutes. Set up a ratio: $\frac{900}{3} = \frac{27,000}{T}$. Reduce $\frac{900}{3}$ to $\frac{300}{1}$. Then $\frac{300}{1} = \frac{27,000}{T}$. Next cross multiply: $300T = 27,000$. Divide both sides by 100: $3T = 270$, and thus $T = 90$. Put this into the time format of hours and minutes by dividing 90 minutes by 60 minutes per hour and we have $1\frac{1}{2}$ hours, which is 1 hour and 30 minutes.

13. C

Translate what is stated in the question step by step. To begin with, Sally has x dollars. After she receives 125 dollars she has $x + 125$ dollars. She spends 100 dollars so she has $(x + 125) - 100$ dollars left. Now simplify $(x + 125) - 100$. $(x + 125) - 100 = x + 125 - 100 = x + 25$. Sally has $x + 25$ dollars left, so (C) is correct.

14. E

Begin by multiplying both sides by 3 to eliminate the denominator. Then $A + B = 15$. If A is greater than 1, then B must be less than 14, thus (E), 15, could not be the value of B.

15. E

Use the average formula, which is Average = $\frac{\text{Sum of the terms}}{\text{Number of terms}}$. Call X the sum of all 5 numbers. Then $\frac{X}{5} = 10$, so $X = 50$. Call Y the sum of the 3 remaining numbers.

Then $\frac{Y}{3} = 8$, so $Y = 24$. Subtracting from the sum of all 5 numbers, the sum of the three numbers that remain leaves the sum of the 2 numbers that were removed. So the sum of the 2 numbers that were removed is $X - Y = 50 - 24 = 26$.

16. B

The bottom surface of the bag is a rectangle and all points are inside the rectangle so choice (A) can be eliminated. (B) is correct.

17. D

The formula for percent increase is Percent Increase = $\frac{\text{New Value} - \text{Old Value}}{\text{Old Value}} \times 100\%$. Here, $\frac{1,470 - 1,050}{1,050} \times 100\% = \frac{420}{1,050} \times 100\% = \frac{2}{5} \times 100\% = 40\%$, so (D) is the best choice.

18. C

Let the length of WX be represented by a. Then the length of WY is $3a$. The length of XY must be $3a - a = 2a$. Then, the length of XZ must be $2 \times 2a = 4a$. So $WZ = WX + XZ = a + 4a = 5a = 5(3) = 15$.

19. C

Draw a rectangle. Label its width w and its length $3w$. The perimeter is 400, thus $3w + w + 3w + w = 400$, so $8w = 400$ and $w = 50$.

20. D

The phrase "for every" indicates a ratio is needed. Call the amount she receives from the $ 18,000 collection x. Here set up $\frac{60}{900} = \frac{x}{18,000}$. After cancellation on the left we have $\frac{1}{15} = \frac{x}{18,000}$. Cross multiply and get $15x = 18,000$. Solve for x by dividing each side by 15 and $x = 1,200$.

21. E

The formula for rate is rate = distance ÷ time. In this problem, rate = 16 miles ÷ 4 hours, or 4 miles per hour.

22. D

7 is one third of 21, and $\frac{1}{3}$ is one third of 1. As a proportion:

$$\frac{7}{21} = \frac{\frac{1}{3}}{x}$$

23. D

The square root of 73 is between 8, whose square is 64, and 9, whose square is 81.

24. A

$$-6 + (-2) + 0 + 8 = 0$$

25. E

Simply divide $\frac{5}{3}$ by $\frac{1}{4}$.

$$\frac{5}{3} \div \frac{1}{4} = \frac{5}{3} \cdot \frac{4}{1}$$
$$= \frac{20}{3} = 6\frac{2}{3}$$

SECTION 4: READING COMPREHENSION

Passage 1

1. A

The answer will probably mention the Marshall Plan and how it helped Europe; (A) fits this bill nicely. (D) and (E) are way too broad. (B) describes what happened during World War II that made the Marshall Plan so necessary, but says nothing about the Plan itself. (C) suggests that the passage is about Marshall himself, when the author actually tells you nothing more than Marshall's name and job—Secretary of State.

2. E

The author's tone is not noticeably positive (A) or negative (C). It betrays no personal feelings such as anxiety (B) or insistence (D). Instead, it's objective.

3. B

This is a relatively easy detail question, for careful readers. Paragraph 2 states that the Marshall Plan doled out "a combined total of $12 billion" to the 16 "participating countries". So each country did not get $12 billion. All of the other statements are substantiated in the passage.

4. D

What was the driving force behind the Marshall Plan? Early in paragraph 1, we learn that post-World War II Western Europe was economically devastated, and that when tensions between the United States and the Soviet Union escalated, U.S. policymakers felt that "substantial financial assistance" was needed in Western Europe "to maintain a state of political stability". This points to (D). None of the other choices draws a correct inference from the passage.

5. D

The first paragraph describes the post-war economic and political problems that the Marshall Plan was intended to solve, and paragraph 2 describes, in general terms, how much money was distributed and how well the plan worked. You can infer, then, that the author will go on to talk about specifics—how the plan's money was put to work in some or all of the 16 participating countries. (E) wrongly sees the Cold War, not the Marshall Plan, as the focus of the passage. (C) goes back in time, to events before the Marshall Plan was ever dreamed up. Other economic recovery plans are never mentioned, and (B) is also unwarranted.

Passage 2

6. **B**

   Immediately following the word "derived" is the phrase, "its wealth from wool and banking". The text then goes on to say that "ships brought raw wool. . . to Bruges". We can assume, then, that "derived" means obtained or got its wealth.

7. **B**

   We're told that among those bankers who came to Bruges, "representatives of the House of Medici" also arrived. We are also told that "soon Bruges became the financial center for all of northern Europe". From this we can assume that the arrival of the Medicis influenced the status of Bruges—(B).

8. **B**

   You need to go to the part of the passage that discusses wool. We do not know anything about the quality of the wool from the text, we only know that the finished cloth was famous in Europe. Nor is there anything to support the claims in (A) and (C). (D) contradicts the passage, as wool was very instrumental in the growth of Bruges. (B) is indeed supported by the text.

9. **D**

   This is a purpose of detail question: You are asked to determine why a specific detail is mentioned. We are told that Bruges became "the financial center for all of northern Europe". Immediately afterward, we're told about the various merchants who came there, indicating how important a place it had become.

10. **D**

    The text says that Bruges so outshone the other cities in prosperity that "the Duke of Burgundy made that city his capital". The Duke chose Bruges because of its prosperity—(D). (B) is totally incorrect, since the text says that Ghent was prosperous.

11. **A**

    (B) is too broad; we are only dealing with Bruges, not the entire Renaissance world. (D) and (E) focus only on small details. (C) is out, too, as there's no evidence to support this statement. (A) is the best answer.

12. **A**

    Try finding these details in the passage: (B) is found in lines 8-9: "nearby cities such as Ghent and Louvain also flourished." (D) is found in lines 7-8: "Merchants from Italy, the Near East, Russia, and Spain all congregated in Bruges." (E) is found in lines 3-4: "Ships brought raw wool there from England and Spain, and carried away finished wool cloth." (C) is found in the article: "Bruges became the financial center." (A) is not true, because the article say the capital was moved to Bruges because the city was so prosperous.

Passage 3

13. **B**

    The choice that best sums up the passage is (B). The other answer choices touch on only one aspect of the text.

14. **A**

    (C) is wrong because tea was first cultivated in China. (B) distorts lines 17-18: the author states that the UK is the world's largest importer of tea, not that tea is the UK's largest import.

15. **B**

    The phrase "cheap labor" in the question stern is also found in paragraph 2, which states that, since tea leaves "must be picked by hand", cultivation in North America "was found to be impractical

because of a shortage of cheap labor. " In other words, tea cultivation requires a supply of cheap labor because the leaves must be hand-picked. (C) contradicts paragraph 1, which says that tea plants are "usually pruned down" to "three or four feet for cultivation". (D) and (E) are never mentioned, and (D) incorrectly reduces the world's cultivation and consumption of tea to two countries, England and China.

16. D

The author's style is informative, offering an encyclopedic summary of the cultivation and uses of tea.

17. A

Since paragraph 3 summarizes the historic uses of tea, beginning with ancient times and ending with consumption today, it's likely that the author will continue to discuss current consumption trends. (D) temptingly mentions the last detail in the passage, but the Boston Tea Party is really only a footnote, a lighthearted explanation of why consumption of tea in the United States today lags behind that of coffee.

18. B

Paragraph 2 describes the difficulties of cultivating tea and where it is currently cultivated.

Passage 4

19. B

Choice (E) applies to leaves that have not had the proper amount of water. Choice (A) applies to plants infested with insects. Choice (C) describes a healthy plant, and choice (D) is about the soil, not the leaves.

20. E

All of the answers above it are discussed at some point in the passage.

21. A

The sentence after the one in which "infest" appears gives the phrase "live on" to explain what infest means.

22. B

Choice (E) is not mentioned in the passage. Choice (A) is a result of forcing the plant to grow too quickly. Choice (C) is a symptom of a plant that has outgrown its pot. Choice (D) is a sign of insects on the plant.

23. A

If all plants were cared for properly, there would be no need to see if they were healthy before purchasing them. Choice (E) is incorrect because if all plants were raised perfectly, they all would be healthy. Choice (D) applies to some plants, not all of them. The passage does not discuss caring for plants at home or a plant's environment, so choices (B) and (C) are incorrect.

Passage 5

24. A

Choice (B) is an example of the definition; therefore, it is not the same as the definition. Choices (C) and (E) describe groupings that are not constellations. Choice (D) refers to one star, not a group of stars.

25. C

This tests your ability to read for detail. Choices (D) and (E) attempt to confuse the reader by giving the opposite seemingly logical but incorrect responses. Choice (B) refers to a constellation mentioned in the passage, which has little to do with the North Star. Choice (A) is not mentioned in the passage.

26. C

This tests your ability to figure out what is suggested by a passage. Choice (E) is

the opposite, and though choices (B) and (D) are correct ideas, they are not proved by the passage. Choice (A) misstates a fact.

27. A

Choices (D) and (E) mentioned details from the passage, but they do not tell the whole story. Choice (B) is a false inference, and choice (C) refers to a possible proof of choice (A).

28. E

Choices (A), (B), (C) and (D) are all details mentioned in the passage. Choice (E) may be true, but the passage deals only with scientific concepts.

Passage 6

29. A

See the first sentence. A century ago was 100 years ago.

30. C

The first sentence of the second paragraph says that the boats are equipped for various jobs, which means that they vary in function.

31. A

By checking on the operation of the junk boats, the harbor police ensure that their activities are legal.

32. B

The other choices all include some activity that is not mentioned as an activity of the harbor police.

33. B

The 450 disabled boats that were towed and the thousands that needed some sort of help (next-to-last sentence) could not possibly have all been of the same kind.

Passage 7

34. B

Choice (B) is correct because there is a lot of information with very little analysis or interpretation. Choice (A) is wrong because the safety of the foods is not

discussed. Choice (C) is wrong because the process is not critiqued. Choice (D) is too strong when compared to choice (B). Choice (E) is wrong because an opposing perspective is not mentioned in the passage.

35. E

Look for the clue. The sentence before says the crops are "developed" for different purposes. Choice (E) is correct because "produce" is the best definition of "yield" as it used in the passage. Choices (A), (B) and (D) are valid definitions of "yield" but not appropriate in the context of the passage. Choice (C) is not a definition of "yield".

Passage 8

36. A

Use word arithmetic. In = not; $able$ = able to be; $explic$ = explained; in other words, without an expressed reason.

37. E

If a disused bell suddenly began to swing, it must have done so all by itself.

38. A

Great astonishment and inexplicable dread certainly imply fright.

39. B

You can get this definition from the last paragraph. A specter is a ghost.

40. A

This is the only choice supported by the selection. The answer is in the last sentence. Choice (D) is incorrect because the man first saw the bell begin to move, and then he heard noises.

SECTION 5: MATHEMATICS ACHIEVEMENT

1. A

An area 1 foot long by $1\frac{1}{4}$ feet wide is $12'' \times 15''$, or 180 square inches in area.

Each block is 6 square inches in area. Therefore, the number of blocks needed is $\frac{180}{6} = 30$ blocks. The height of each block is irrelevant to the solution of the problem.

2. A

The area of a circle is equal to πr^2. The circumference of a circle is equal to πd. If the number of inches in each are equal, then $\pi d = \pi r^2$, or the diameter equals the square of the radius. The only value for which the diameter can equal the square of the radius is a diameter of $4''$.

3. C

The LCM is found by rewriting each number in prime factorization and finding the product of each unique prime factor. 2^2 and 2^3 are not selected because each is a factor of 2^5.

$$28 = 2^2 \cdot 7$$
$$24 = 2^3 \cdot 3$$
$$32 = 2^5$$
$$\text{LCM} = 7 \cdot 3 \cdot 2^5 = 672$$

Trial and error can also give you this answer.

4. A

If $9x + 5 = 32$, then $9x = 27$ and $x = 3$. Therefore, $18x + 5$ equals $18(3) + 5 = 59$.

5. D

Fractions are most easily compared by comparing cross-products. Start by comparing $\frac{2}{3}$ with $\frac{5}{7}$. The product of 3 and 5 is 15. The product of 7 and 2 is 14. Therefore, $\frac{5}{7}$ is larger than $\frac{2}{3}$. Continue this process with the other fractions to be compared.

$\frac{5}{7} \diagdown \frac{8}{11}$ note $\frac{8}{11} > \frac{5}{7}$ and also $\frac{8}{11} > \frac{2}{3}$

$\frac{8}{11} \diagdown \frac{9}{13}$, note $\frac{8}{11} > \frac{9}{13}$

$\frac{2}{3} \diagdown \frac{9}{13}$, note $\frac{9}{13} > \frac{2}{3}$ and also $\frac{9}{13} < \frac{5}{7}$

Therefore, $\frac{2}{3} < \frac{9}{13} < \frac{5}{7} < \frac{8}{11}$.

6. E

A cubic foot contains $12'' \times 12'' \times 12''$ or 1,728 cubic inches. If each cubic inch weighs one pounds, the substance weighs $1 \cdot 1,728$, or 1,728 pounds.

7. A

170 millionths in decimals is 0.00017. The number of places to the right of the decimal point is equal to the number of zeros in the whole number. 1,700,000 has five zeros.

8. C

Because the circumference of a circle is equivalent to π times the diameter, the circumference is also equal to π times twice the radius. Divide the circumference by 2π.

9. E

Four boards, each $3'9''$ long, total 15 feet. The carpenter must buy 15 feet of wood.

10. A

Find the answer to this problem by substituting the values given into the formula.

$$S = 16t^2$$
$$S = 16(4)^2 = 16(16) = 256 \text{ feet}$$

11. B

The larger the number of the denominator of a fraction, the smaller the quantity represented. For example, $\frac{1}{4}$ represents a lesser quantity than $\frac{1}{2}$. Therefore, as x becomes greater, y becomes smaller.

12. E

If the second box has each dimension 4 times that of the first box, then its volume is $4 \times 4 \times 4 = 64$ times as great.

13. C

The area of the flower bed is 4π sq. ft. ($A = \pi r^2$). The area of the new bed is to be nine times as great, or 36π sq. ft. A

bed with an area of 36π sq. ft. must have a diameter of $12'$, and a radius of $6'$, since $A = \pi r^2$.

14. C

Use the formula $D = R \times T$ to find the time it actually took to get to Buffalo; time = distance ÷ rate. Travel time of trip was equal to 290 miles ÷ 50 mph.

Travel time = $5\frac{4}{5}$ hours, or 5 hours 48 minutes. Scheduled travel time was between 10:10 a.m. and 3:53 p.m., an interval of 5 hours 43 minutes. Therefore, the train took about 5 minutes longer than scheduled.

15. D

Solve the equation for x:
$$3x - 2 = 13$$
$$3x = 15$$
$$x = 5$$
If $x = 5$, then $6x + 20 = 6(5) + 20 = 50$.

16. C

Since the number of pounds of each kind of cake sold was the same, we can say that a pound of cake sold for an average price of 30 ¢ per pound.

25 ¢ + 30 ¢ + 35 ¢ = 90 ¢ ÷ 3 = 30 ¢ per lb.

Divide the total sales income of $ 18 by 30 ¢ to find how many pounds were sold.
$$\$ 18 \div 0.30 = 60$$

17. C

A floor $12' \times 12'$ is 144 sq. ft. in area, and would require 144 tiles that are each one foot by one foot. Twelve tiles would be placed along the width and length of the room. If $9''$ tiles are used, it requires 16 of them placed end to end to cover the length of the room. Therefore, it requires 16×16 tiles to cover the floor, or 256 tiles. It requires 112 more $9''$ tiles than $12''$ tiles to cover the floor.

18. B

If p pencils cost c cents, the cost of each pencil is $\frac{c}{p}$ cents. To find the cost of n pencils, we multiply the cost of each times n:
$$\frac{c}{p} \cdot n = \frac{cn}{p}$$

19. E

If necessary, try each of the answers for yourself, to see that each is false. Choice (C) is untrue for the number 1.

20. D

Think of a rectangle with the dimensions $1''$ by $2''$. Its area is 2 square inches. If we double each dimension, to $2''$ by $4''$, the area becomes 8 square inches, which is four times the area of the first rectangle. This is equal to an increase of 300%.

21. A

x is less than or equal to 7, and at the same time, x is greater than or equal to 4. An open circle would indicate a "less than" or a "greater than" condition at the endpoint, while filled-in circles indicate a "less than or equal to" or a "greater than or equal to" condition at the endpoint.

22. E
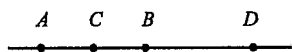$$13^2 = 169$$
$$12^2 = 144$$
$$169 - 144 = 25$$

23. A

To have an average of 93 after six tests, Eric's total score would need to be $93 \times 6 = 558$. He already has a total score of $96 + 93 + 86 + 100 + 94$, which equals 469, so he needs $558 - 469$ points, which is 89.

24. B

In the form $y = mx + b$, the slope is given by m and the y-intercept is given

by b. The y-intercept is the value of y when $x = 0$.

25. E

A   C   B   D

$\overline{AC}$ and $\overline{CB}$ are congruent, making C the midpoint of $\overline{AB}$, AC is 7 so BC is 7 and AB is 14. It is not given that B is the midpoint of $\overline{AD}$, just that it lies between A and D. Therefore, $\overline{AB}$ and $\overline{BD}$ are not necessarily congruent. There is no other relationship that will give the length of $\overline{BD}$ or of $\overline{CD}$.