SAMPLE TEST, FORM A
PART 1 — VERBAL

Suggested Time — 75 Minutes

45 QUESTIONS

SCRAMBLED PARAGRAPHS

PARAGRAPHS 1-5

DIRECTIONS: In this section, arrange each group of sentences to create the best paragraph. The first sentence for each paragraph is given; the remaining five sentences are listed in random order. Choose the order for these five sentences that will create the **best** paragraph, one that is well-organized, logical, and grammatically correct. Each correctly ordered paragraph is worth double the value of a question in any other section of the test. No credit will be given for responses that are only partially correct.

To keep track of your sentence order, use the blanks to the left of the sentences. For example, write "2" next to the sentence you think follows the first sentence, "3" next to the sentence you think follows "2," and so on. You may change these numbers if you decide on a different order. When you are satisfied with your sentence order, mark your choices on your answer sheet.

Paragraph 1

Chinese sailors used magnetic compasses long before Europeans did.

_____ **Q.** Then, hanging in a windless place, the magnetized end of the needle would always point to the south.

_____ **R.** The magician would magnetize a needle and balance it on the rim of a cup to act as a compass.

_____ **S.** This balancing act was hard to maintain, and the needle often fell off.

_____ **T.** In fact, some of the earliest compasses in recorded history were made by "magicians" in ancient China.

_____ **U.** A more effective way to keep the needle free to move in response to its magnetic pull was to attach a strand of silk to the center of the needle with a tiny piece of wax.

Paragraph 2

In the west, we are most familiar with world explorers who were of European origin.

_____ **Q.** Marco Polo, a European who traveled to China in the thirteenth century, serves as a classic example.

_____ **R.** Perhaps the most far-flung of these lesser known travelers was Ibn Batuta, a North African who left his birthplace of Tangier in the year 1325.

_____ **S.** Ibn Batuta traveled all over Africa and Asia, including China, Indonesia, the Maldive Islands, and the coast of East Africa.

_____ **T.** Some lesser known explorers, however, logged enough miles and adventures to make Marco Polo's journey look like an evening stroll.

_____ **U.** Batuta's journeying lasted 24 years and covered at least 75,000 miles, most of it by land, a record that would not be surpassed for another 500 years.

Paragraph 3

The processionary caterpillar illustrates how an insect species relies on instinct in its daily routines.

_____ **Q.** Dozens of caterpillars nest in a tree during the day, then leave together at night in search of food.

_____ **R.** After feeding, the caterpillars also use the silken "road" to help them return to their nest.

_____ **S.** As they leave the nest, one caterpillar becomes the leader who spins and lays out a silk line as it moves along.

_____ **T.** The processionary's instinct is so strong that, if a person were to pick up one end of the silk line and bring it around to join the other end, creating a closed circle, the caterpillars might travel around the loop for days without changing course.

_____ **U.** The other caterpillars line up end to end and walk on the leader's silk line, each one reinforcing the rope by laying down its own silk as it passes over.

Paragraph 4

Helen Suzman was a member of the South African Parliament from 1953 to 1993.

_____ **Q.** Despite this international recognition of her work, Suzman was largely unsuccessful during most of her career in her efforts to defeat apartheid.

_____ **R.** She has, however, been given numerous other human-rights awards and honorary degrees from several universities, including Oxford, Harvard, and Brandeis.

_____ **S.** At last, Suzman saw her dream fulfilled with the decision of the South African Parliament to dismantle the apartheid system, and she has retired from public life.

_____ **T.** In recognition of her personal efforts, Suzman was nominated for the Nobel Peace Prize three different times, but she has never won.

_____ **U.** An outspoken critic of apartheid during those forty years, she was often the only one to voice her protest against the policies of the South African government.

Paragraph 5

Jules Verne wrote about travel to the moon more than 100 years ago, but he was not the first writer to do so.

_____ **Q.** Three hundred years before Verne, Johannes Kepler, probably the first scientist to recognize that the atmosphere of the Earth gave out before reaching the moon, wrote about an imaginary trip there.

_____ **R.** Thus, while Jules Verne is credited with writing the first "realistic" science fiction, it is clear that space travel has haunted people's imaginations for centuries.

_____ **S.** Even earlier, in A.D. 1010, a Persian poet described a trip to the moon on a throne pulled by eagles.

_____ **T.** Perhaps credit for the first space flight description, however, should go to a second-century Greek whose fictional sailing ship was caught up in a whirlwind that blew it to the moon.

_____ **U.** A contemporary of Kepler's, Francis Godwin, wrote of men carried to the moon by geese.

LOGICAL REASONING

QUESTIONS 11-20

DIRECTIONS: Read the information given and choose the **best** answer to each question. Base your answer **only on the information given.**

In a logical reasoning test, certain words must be read with caution. For example, "The red house is **between** the yellow and blue houses," does not necessarily mean, "The red house is **between and next to** the yellow and blue houses"; one or more other houses may separate the red house from the yellow house or from the blue house. This precaution also applies to words such as **above, below, before, after, ahead of,** and **behind.**

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11. Five plastic geometric shapes are stacked on the table. They are numbered consecutively from bottom to top.

1) One shape is a triangle.
2) The circle is the fourth shape.
3) There are exactly three shapes between the rectangle and the square.
4) There are exactly two shapes lower than the oval; one of them is the rectangle.

In which position is the triangle?

A. second
B. third
C. fourth
D. fifth
E. Cannot be determined from the information given.

12. A species is extinct when it no longer has any living members. Scientists thought that fish species X was extinct. In 1980, a fisherman caught a living member of species X. This species is now known to live in large numbers in the near-freezing water of the north Atlantic Ocean.

Based only on the information above, which of the following statements is a valid conclusion?

F. Species X was never actually extinct.
G. Species X was extinct, but reappeared in 1980.
H. Species X has been discovered, but will soon become extinct.
J. There are other living species that are thought to be extinct.
K. Living members of extinct species are found only in the ocean.

13. At the lumberyard, five boards are stacked in a pile. The pile contains one board each of maple, ash, oak, pine, and walnut.

1) The maple board is lower in the stack than the walnut board.
2) Exactly two boards are between the walnut board and the oak board.
3) The ash board is third from the top.

If the top board is walnut, which board is on the bottom?

A. pine
B. maple
C. oak
D. Either pine or maple, but it is not possible to determine which one.
E. Either maple or oak, but it is not possible to determine which one.

14. People who graduate from North College are expected to donate at least $500 per year to the school. Sydney donates $100 per year to North College.

Based only on the information above, which of the following **must** be true?

F. Sydney did not graduate from North College.
G. If Sydney earned more money, she would donate more to the college.
H. If all graduates donated only $100 per year, North College could not continue to operate.
J. If Sydney graduated from North College, she does not do what is expected of her.
K. Sydney contributes other services to North College to compensate for her lower financial contribution.

15. At the end of an auto race, four cars crossed the finish line, one at a time. The four cars were blue, green, red, and yellow.

1) Jennifer finished directly behind Pierre.
2) The red car finished before the green car.
3) Charles was not in the blue car.
4) Pierre was in the red car.
5) Stephanie, who was in the yellow car, finished after Jennifer.

Based only on the information above, which of the following statements **must** be true?

A. The blue car finished before the green car.
B. Charles finished third.
C. Jennifer drove the green car.
D. Stephanie finished third.
E. The green car finished second.

16. Six potted houseplants are placed in a row. There are four varieties: African violet, fern, ivy, and pothos. There are two pots each of two varieties and one pot each of the other two varieties.

1) There are two ivy plants and exactly one African violet.
2) Two ferns are separated only by a pothos.
3) An ivy plant is next to the African violet.
4) A fern is next to the African violet.

Which houseplants are at the ends of the row?

F. fern and ivy plant
G. pothos and fern
H. fern and African violet
J. two ivy plants
K. Cannot be determined from the information given.

17. Every member of club X is also a member of club Y. Some members of club Z are also members of club Y. Sonya is a member of exactly two of these clubs.

Based only on the information above, which of the following **must** be true?

- **A.** If Sonya is in club X, she is not in club Z.
- **B.** If Sonya is in club Y, she is not in club Z.
- **C.** If Sonya is in club Y, she must be in club X.
- **D.** All members of club Y are in at least two clubs.
- **E.** All members of club Z are in at least two clubs.

Questions 18 and 19 refer to the following information.

In the code below, (1) each letter represents the same word in all 3 sentences, (2) each word is represented by only one letter, and (3) in any given sentence, the position of a letter is **never** the same as that of the word it represents.

M	Q	T	N	W	means
"This	train	crosses	seven	states."	

N	X	Q	M	W	means
"This	train	crosses	five	states."	

W	S	N	Q	X	means
"This	train	crosses	five	countries."	

18. Which letter represents "states"?

- **F.** X
- **G.** N
- **H.** Q
- **J.** W
- **K.** M

19. Which word is represented by W?

- **A.** this
- **B.** train
- **C.** crosses
- **D.** Either "this" or "train," but cannot determine which one.
- **E.** Either "train" or "crosses," but cannot determine which one.

20. If the moon is full, my dog will bark. If my dog sees a cat, my dog will bark.

Based only on the information above, which of the following **must** be true?

- **F.** If my dog barks, it has seen a cat and the moon is full.
- **G.** If my dog barks, it has seen a cat.
- **H.** If my dog doesn't bark, it has not seen a cat and the moon isn't full.
- **J.** If the moon is not full, my dog won't bark.
- **K.** If the moon is full, my dog will see a cat.

READING

QUESTIONS 21-50

DIRECTIONS: Read each passage below and answer the questions following it. Base your answers **only on information contained in the passage.** You may reread a passage if you need to. Mark the **best** answer for each question.

The saber-toothed cat, now extinct but once one of history's most ferocious carnivores, lived between ten thousand and forty thousand years ago. The saber-tooth is named for its most notable feature, a pair of sharp, curved canine teeth—as long as eight inches—used to attack and kill a variety of large, grass-eating animals. Its most frequent prey was the elephant-like mastodon. Skeletons of the two animals have been found together on several continents, and the extinction of the saber-tooth closely followed the demise of mastodons in each of these locations.

Much of what scientists know about the saber-tooth results from their study of bones found in the La Brea tar pits in Los Angeles. For centuries these sticky death traps performed a grisly service for modern scientists, trapping and suffocating thousands of careless, usually healthy animals, both predator and prey, and preserving their bones in asphalt. From La Brea bones, much of the saber-tooth's violent life has been reconstructed. The cat's six-foot long skeleton revealed its killing technique: a swift and powerful forward charge, a 90-degree opening of the jaw, and, finally, the use of its sharp teeth and powerful neck muscles to inflict wounds that could bring down even a mastodon in a few minutes.

Recent studies, however, have somewhat modified scientists' view of the efficient, lone killer and hint that the saber-tooth had a heart—at least for its own kind. The many chipped, broken, mended, arthritic, dislocated, and infected La Brea bones have led researchers to conclude that the violent attacks of the saber-tooth often put them out of commission for considerable amounts of time. During these mending periods, researchers have reasoned, other cats must have allowed wounded comrades to share in their kills until they could hunt again. The attractive image of a saber-tooth social life, with cats hunting in packs and supporting their own wounded, much like today's lions, is supplemented by another La Brea discovery. A study of saber-tooth throat bones indicates that the cats possessed the ability to purr as well as roar.

21. Which of the following best tells what this passage is about?

　A. how scientists find saber-tooth bones
　B. the relationship between mastodons and saber-tooths
　C. how the La Brea tar pits were formed
　D. how knowledge about saber-tooths is gained from bone studies
　E. why saber-tooths are studied by scientists

22. Which of the following is **not** mentioned in the passage as a behavior of saber-tooths?

　F. charging prey
　G. biting prey
　H. sharing food
　J. escaping its predators
　K. purring

23. What does the passage imply about the prey of the saber-toothed cat?

   A. They often killed the cats during their battles.
   B. They were dependent upon the cats for survival.
   C. They were usually larger than the cats.
   D. They lived primarily in what is now California.
   E. They were never trapped in the tar pits.

24. Which of the following best describes what is suggested by the statement that the saber-tooth "had a heart" (line 35)?

   F. The killing behavior was unusual for the cats.
   G. The cats felt something like regret at killing their prey.
   H. The cats never behaved violently toward each other.
   J. The cats felt emotions such as fear and anger.
   K. The cats' food-sharing resembled an act of kindness.

25. What is the most likely reason that saber-toothed cats became extinct?

   A. They were trapped and killed in the tar pits.
   B. Their main source of food became extinct.
   C. Many were wounded, but they were not nursed by other saber-tooths.
   D. They were killed off by their predators.
   E. They were extremely vulnerable to disease and injury.

26. What is the "grisly service" (line 19) provided by the La Brea tar pits?

   F. They trapped predators that would have killed other animal species.
   G. They helped predators capture their prey more easily.
   H. They trapped only saber-toothed cats.
   J. They preserved the skeletons of animal species that are now extinct.
   K. They provided a place where wounded saber-tooths could go to die.

Tea has a long history of medicinal use in India and China, where it was used to relieve drowsiness and thus aid the meditation of Buddhist monks. A monk studying in China brought the first tea to Japan some time before A.D. 729—the first recorded use of tea in that country. In 1191, tea drinking in Japan was further encouraged by Yaesai, a Zen master who brought new tea seeds from China. Yaesai treated the tea plant as a sacred remedy and an aid to religious experience. His writings contain the outline of what has become known as the "tea ceremony."

According to some sources, the Japanese nobility practiced a quite different social activity associated with tea drinking—the tea tournament. Reminiscent of modern-day wine-tasting events, tea tournaments involved tasting bowls of tea from different areas and guessing the origin of each. This version of tea drinking was far removed from the earlier connection with religious activity.

The next important development in the tea ceremony occurred during the fifteenth century. The Silver Pavilion was built for a retired Japanese military leader, or shogun, who devoted the rest of his life to perfecting the arts and rituals of the ceremony. By that time the tea ceremony had become an essential part of the cultural life of Japan. Perhaps the ceremony reached its pinnacle in the sixteenth century with the great tea master Rikyu, who established the rules and etiquette for the ceremony as it is still practiced today.

The tea ceremony has been described as a "ritualized sequence of movements, a formal dance of significant gestures." Two principles prevail: *shibui* (impeccable taste) and *wabi* (simplicity and absence of luxury), and the ceremony follows strict rules. The ceremony takes place in a tea room, either part of a house or a separate building in a garden. Although simple in design and lacking in pretension, tea rooms are built of the finest materials and with the most expert workmanship. Often they cost more than the house itself!

The full tea ceremony has three parts and may last for four hours. The guests spend a few moments in the garden before being invited into the tea room for a light meal. After eating, they return to the garden for meditation before returning for "thick tea." The host prepares one cup of tea, and the cup is passed from one guest to another in a series of bows and other movements. Again the guests retreat to the garden. During the third part, known as "weak tea," a separate batch of tea is prepared for each guest. The weak tea part of the ceremony is often the only one practiced today, when tea ceremonies may be conducted to honor birthdays or other special days. Even in this shortened form, however, the tea ceremony provides busy people an opportunity for quiet reflection in a gracious setting.

27. Which of the following best tells what this passage is about?

   A. tea ceremonies around the world
   B. a contrast between the tea ceremony and other Japanese traditions
   C. the development of the Japanese tea ceremony
   D. how tea came to Japan
   E. how Rikyu invented the tea ceremony

28. What does the passage suggest about the use of tea as a medicinal cure?

   F. It was used only by members of the nobility.
   G. It could cure almost any disease.
   H. It was used only in Japan.
   J. It has been used in this way for centuries.
   K. Its use was considered foolish by Zen masters.

29. Which of the following statements is true of the present-day tea ceremony in Japan?

    A. It usually includes only the weak tea portion.
    B. It never takes place in the host's home.
    C. It often occurs in an ornate tea pavilion.
    D. It requires four hours to complete.
    E. It always includes a light meal.

30. According to the passage, which of the following statements about Rikyu's tea ceremony is accurate?

    F. He developed it around the year 1200.
    G. It established rules that are still observed.
    H. It consisted only of thick tea.
    J. It was used by Buddhist monks.
    K. It was intended only for shoguns and other aristocracy.

31. Which of the following is an expression of the principle of *wabi*?

    A. a wine-tasting party
    B. a tea tournament
    C. the design of a tea room
    D. the desire to celebrate birthdays
    E. the desire to drink only the finest tea imported from China

32. From the comments of the author, the most likely reason the tea ceremony has survived to the present day is that

    F. tea is still considered a luxury.
    G. people again recognize the medicinal value of tea.
    H. people still use tea as an aid to religious experience.
    J. people appreciate the opportunity to be quiet and reflective.
    K. people still enjoy participating in tea tournaments.

The tenth century A.D. was a period of cultural and artistic revival in the European countries bordering the Mediterranean Sea. The magnificent works of art and architecture of that period used, among other materials, African gold, ivory, and rock crystals. But most of these materials would have been unavailable to European artists without a sophisticated trading network established along the east coast of Africa, from present-day Somalia to northern Mozambique. The African traders represented many groups but were united by their common use of the Swahili language. For that reason, the traders are collectively known as "Swahili."

For centuries, the Swahili had sailed the African coast in small, seaworthy boats of their own design. They were expert navigators, and their knowledge of the dangerous coastal waters enabled them to expand their influence along 3,000 kilometers of East African coastline. In this region, known as the Swahili corridor, the Swahili traded salt, cloth, and iron products for a wide range of goods from groups living in the African interior.

In the ninth century, the Swahili traded with Persian Gulf merchants, who in turn traded with China. The exchanges involved Chinese pottery—discovered in recent East African coastal excavations—for African goods, particularly ivory. In the tenth century a new trade sprang up as Muslim traders from the Red Sea came seeking African gold, ivory, and crystal to sell to Mediterranean Europe. They found the Swahili trading network already in place. For the goods they sought, the Muslims offered not only money but technical advice in matters that ranged from building techniques to arts and crafts.

The Swahili trading network did more than help the circulation of international products between Europe, Asia, and Africa. Since the Swahili traded with varied African societies, from herders and farmers to hunters, they became a source of exchange for both goods and information within the region. Their network brought both economic advancement and a degree of cultural unity among the people of East Africa.

33. Which of the following best tells what this passage is about?

    A. the role played by the Swahili in international trade in the ninth and tenth centuries
    B. the Swahili contribution to a revival of African art and culture
    C. the effect of the Swahili traders on the art of tenth century Europe
    D. the sailing and boatbuilding skills of the Swahili traders
    E. how the Swahili traders used their wealth to develop their homeland

34. Who were the Swahili's first trading partners?

    F. the Chinese
    G. European countries
    H. other African societies
    J. Red Sea merchants
    K. Persian Gulf merchants

35. What was most important in enabling the Swahili to establish their trade along such a large portion of the African coast?

    A. large holdings of gold and ivory
    B. knowledge of the coastal waters
    C. ability to trade with European countries
    D. knowledge of European art
    E. possession of goods from China

36. What is an example of the goods sought by the traders from the Red Sea?

    F. Chinese pottery
    G. money
    H. art objects
    J. building techniques
    K. ivory

37. What was the most likely location for the Swahili to exchange gold for Chinese pottery?

    A. in the interior of Africa
    B. on the coast of East Africa
    C. in the Persian Gulf
    D. on the shores of the Red Sea
    E. somewhere in China

38. In what way were Swahili traders involved in the artistic revival in tenth-century Europe?

    F. The materials they traded with Muslim traders from the Red Sea were used in the European revival.
    G. They sold African gold, ivory, and crystal to the Europeans in exchange for arts and crafts.
    H. They traded salt, cloth, and iron products with Persian Gulf merchants in exchange for gold, ivory, and crystal.
    J. They offered technical advice as well as money in exchange for European art.
    K. Their network introduced artistic practices of the Chinese to Europeans.

A brilliant comet appears in the sky about once every ten years. In recent times, the appearance—technically called an apparition—of a comet is frequently the occasion for celebration, including T-shirts and posters. One shirt, for Halley's comet in 1985-86, trumpeted, "coming soon to a sky near you." For most of the history of the human race, however, the appearance of a comet has inspired fear, dire predictions, and irrational behavior. At first glance, that may seem surprising. Comets are beautiful, slow-moving objects, absolutely quiet, and clearly very far away from the earth. Why, then, did they inspire such terror and forecasts of doom in virtually every culture of the world for thousands of years? It may well be because—until the last few centuries—people could not fit comets into what they knew about the universe, and because fear is a very human reaction to the unknown.

In earlier times, people were in much closer touch with the natural world around them than are most people today. They watched the skies and learned to recognize, if not fully understand, the regularity of the movements of heavenly bodies. They learned to predict these movements and to connect them with specific aspects of their lives, such as the passage of time, the seasons, and the weather. Comets, on the other hand, appeared without warning anywhere in the sky, wandered aimlessly for a few days, then disappeared as suddenly as they had come. With no apparent rhyme or reason for their appearances, comets became objects of awe and fear.

In the twenty-first century, these once-feared objects can be described scientifically. For example, every comet has a head, with a nucleus of icy material that has been described as a "dirty snowball." This nucleus is surrounded by a fuzzy-looking, gaseous region called the coma. Frequently a comet also has a tail composed of gases and dust. The ancient Chinese called comets broom stars, the Aztecs

referred to them as smoking stars, and the Tshi people of Zaire named them hair stars. The English name for them comes from the Greek kometes, meaning long-haired. The Tonga people of the South Pacific perhaps came closest to the truth when they named them stars of dust.

Nearly every culture has taken the arrival of a comet as a sign of undesirable change or bad luck. To the Masai of East Africa, comets portended famine, and to the Zulus farther south, war. The Chinese catalogued dozens of comet types, each predicting a specific kind of doom. Europeans regarded them with superstition and fear. Only the !Kung people of modern-day Namibia were optimistic when sighting a comet, believing it guaranteed a happy future.

Although we now know a great deal about comets and can predict their apparitions and movements with considerable accuracy, they are still capable of inspiring awe and wonder as they light up the night sky.

39. Which of the following best tells what this passage is about?

    A. the return of Halley's comet
    B. what comets look like
    C. people's fascination with and fear of comets
    D. records of comet apparitions
    E. what astronomers know about comets

40. Why did comets inspire fear in ancient times?

    F. They appeared to be very close to earth.
    G. They appeared frequently in the night sky.
    H. They exploded noisily when they disappeared.
    J. Their appearances were unpredictable.
    K. They predicted war and disaster.

41. The !Kung people differed from other African cultures because they

  A. thought comets were made of dust.
  B. kept careful records of comet apparitions.
  C. believed comets told of coming war.
  D. understood the movements of comets.
  E. took comets to be signals of good luck.

42. Why does the author say that the Tongan name for a comet "came closest to the truth" (line 54)?

  F. The tail of a comet is made of dust.
  G. The shape of the head and tail of a comet suggests long hair.
  H. A comet is a type of star.
  J. A comet is composed of smoke.
  K. The Tongans believed comets brought good luck.

43. The T-shirt boasting, "coming soon to a sky near you," implied that

  A. Halley's comet was not bright enough to be seen.
  B. the appearance of Halley's comet cannot be predicted accurately.
  C. the arrival of a comet still inspires great interest.
  D. comets are no longer of interest to the public.
  E. something terrible would happen in 1985 or 1986.

44. Which of the following statements about the relationship between comets and disasters is best supported by the passage?

  F. They may occur at the same time, but that doesn't mean that one causes the other.
  G. The relationship that existed in ancient times no longer exists.
  H. Increased scientific knowledge about comets can be used to predict disasters more accurately.
  J. If people were in closer touch with the natural world, the relationship would be clearer.
  K. Most ancient cultures did not believe there was a relationship between comets and disasters.

For centuries, traveling performers played an important role in the culture of India. In ancient times, villagers living in remote areas depended on these traditional folk artists to bring news from far-away places and to entertain them with songs, stories, and acrobatics. Even though the local leaders in the sixteenth century emphasized court-based entertainment and, later, industrialization broke down the old village society, the traditional arts managed to survive. But since India became independent in 1947, people in the rural areas began relying on radio, television, and the movies for information and entertainment. Support for the wandering entertainers was no longer strong enough to sustain them, and like many displaced workers before them, these folk artists fled to the city in search of new audiences.

In the neighborhoods of the largest cities in India, new threats faced the storytellers, puppeteers, and sword-swallowers. Because they performed in the streets, they were considered beggars—illegal under the new laws of independent India. As recent arrivals with little money, they became squatters in the slums of the cities, victims of slum-clearing projects that frequently flattened their huts. But two recent changes may have created a turning point in the fortunes of the performers. The government has finally recognized their right to form a cooperative and be treated like other businesspeople. And the outside world, exposed to recent movies and TV shows about India, has become fascinated with all things Indian and discovered (or rediscovered) the ancient traditions of the folk artists.

The transition from rural wandering to urban street performing has encouraged other changes as well. In earlier days, the various arts were performed by members of different castes, who would not associate with each other. The cooperative has required that those divisions be broken down. Now some young people even change from one skill to another. Women have won the right to perform in roles once reserved for men. Some children of these performers have chosen not to follow the old traditions and have become bus drivers and industrial workers, but others are preserving the old ways. Many street artists return annually to their rural ancestral villages, but when they go back to the city, they are coming home.

45. Which of the following best tells what this passage is about?

   A. Traditional traveling performers in India have had to adapt to changing times.
   B. Folk artists traditionally provided a means of communication in India.
   C. Folk artists inherited their skills from their ancestors.
   D. It is extremely important for a country to preserve its artistic heritage.
   E. Steps must be taken to preserve the Indian tradition of street performance.

46. Which of the threats to traveling performers came first?

   F. the invention of television
   G. laws against begging
   H. industrialization
   J. slum clearances
   K. entertainment based in the courts of rulers

47. Which of these statements would the author most likely agree with?

   A. Traditional street performing will soon die out.
   B. Puppetry, acrobatics, and storytelling are now primarily urban professions.
   C. The cooperative has eliminated the occupations of artists and musicians.
   D. Laws against begging should be repealed.
   E. Soon people will see traditional Indian arts only on television.

48. The passage suggests that the Indian government currently treats street performers as

    F. national treasures.
    G. beggars.
    H. businesspeople.
    J. displaced persons.
    K. slumlords.

49. Which of the following is **not** suggested as a strength of the current folk artists?

    A. their willingness to change as society changes
    B. their ability to preserve traditional values
    C. the fact that they are breaking down caste barriers
    D. their ability to experiment with new methods
    E. their willingness to travel constantly around the country once again

50. What effect has the rediscovery of ancient traditions by the outside world had on Indian folk artists?

    F. They have regained some of their former popularity.
    G. They have lost their legal status as performers.
    H. They have returned to their homes in the rural villages.
    J. They have rejected changes in favor of the old traditions.
    K. They have restricted the participation of women and children.

PART 2 — MATHEMATICS

Suggested Time — 75 Minutes

50 QUESTIONS

GENERAL INSTRUCTIONS

Solve each problem. Select the **best** answer from the choices given. Mark the letter of your answer on the answer sheet. You can do your figuring in the test booklet or on paper provided by the proctor. **DO NOT MAKE ANY MARKS ON YOUR ANSWER SHEET OTHER THAN FILLING IN YOUR ANSWER CHOICES.**

IMPORTANT NOTES:

(1) Formulas and definitions of mathematical terms and symbols are **not** provided.

(2) Diagrams other than graphs are **not** necessarily drawn to scale. Do not assume any relationship in a diagram unless it is specifically stated or can be figured out from the information given.

(3) Assume that a diagram is in one plane unless the problem specifically states that it is not.

(4) Graphs are drawn to scale. Unless stated otherwise, you can assume relationships according to appearance. For example, (on a graph) lines that appear to be parallel can be assumed to be parallel; likewise for concurrent lines, straight lines, collinear points, right angles, etc.

(5) Reduce all fractions to lowest terms.

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51. What is the greatest common factor of 105 and 126?

    A. 3
    B. 7
    C. 9
    D. 21
    E. 35

52. Simonne, Marco, and Evon were partners in business. Simonne and Marco each received twice as much of the profit as Evon received. If the total profit was $1,800, how much did Evon receive?

    F. $360
    G. $600
    H. $720
    J. $900
    K. $1,800

53.
$$x \overline{)xy + 3} \quad \frac{y \text{ rem } n}{}$$

In the division problem above, $3 < x$. What is the value of n?

    A. x
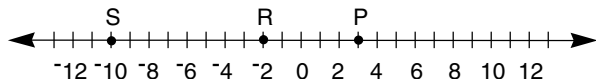   **B.** y
    C. 3
    D. $x + 3$
    E. $y + 3$

54. Express 48.762×100 in scientific notation.

    F. 0.48762×10^3
    G. 0.48762×10^4
    H. 4.8762×10^2
    J. 4.8762×10^3
    K. 48.762×10^2

55.

On the number line above, Q (not shown) is the midpoint of $\overline{SR}$. What is the length of $\overline{PQ}$?

A. 2.5 units
B. 6.5 units
C. 7 units
D. 9 units
E. 13 units

56. An 11-sided polygon has 3 sides each of length x centimeters and 6 sides each of length $2x$ centimeters. The lengths of the other 2 sides are 12 centimeters and 13 centimeters. If the perimeter of the polygon is 100 centimeters, what is the value of x?

F. 3
G. 5
H. 12
J. 25
K. 75

57. What is the value of $3|x| - 5|y|$ if $x = {}^-7$ and $y = {}^-11$?

A. $^-76$
B. $^-34$
C. $^-4$
D. 34
E. 76

58. $(\sqrt{36})(\sqrt{16}) =$

F. 4
G. 6
H. 24
J. 48
K. 144

59. Miller's Factory has decided to run nonstop for three 14-hour shifts. The whistle to start the first shift is to blow at 9:00 a.m. At what time should the whistle blow to **end** the third shift?

A. 3:00 a.m.
B. 3:00 p.m.
C. 1:00 a.m.
D. 1:00 p.m.
E. 12:00 midnight

60. N is an element of the set

{0.2, 0.7, 1.4, 2.0, 7.0}, and $\dfrac{4.2N}{1.2}$ is an

integer. What is N?

F. 0.2
G. 0.7
H. 1.4
J. 2.0
K. 7.0

61. {1, 2, 3, . . . , 175, 176, 177, 178}

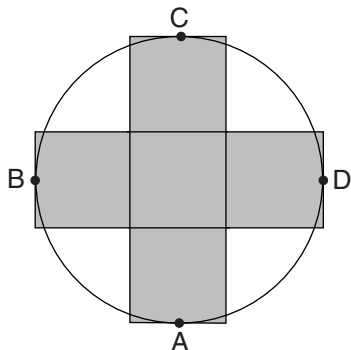How many numbers in the set above have 5 as a factor but do not have 10 as a factor?

A. 1
B. 3
C. 4
D. 17
E. 18

62. n is an even integer and $10 < n < 19$. What is the mean of all possible values of n?

F. 14
G. 14.5
H. 15
J. 15.5
K. 30

63.

The shaded figure in the diagram above consists of five squares. It touches the circle at points A, B, C, and D. The radius of the circle is 15 cm. What is the area of the shaded portion of the figure?

A. 25 sq cm
B. 100 sq cm
C. 125 sq cm
D. 500 sq cm
E. 900 sq cm

---

64. $(13 + 2x) - (4 - x) =$

F. $9 - 3x$
G. $9 + x$
H. $9 + 3x$
J. $13 + 3x$
K. $17 + x$

---

65. This week Elliott worked 3 days as a clerk in his mother's store. He was paid $3.78 per hour. If he worked $6\frac{1}{2}$ hours each day, how much should Elliott be paid?

A. $11.34
B. $13.23
C. $13.28
D. $35.91
E. $73.71

---

66. Assume that the notation $\mp(w, x, y, z)$ means "Add w and x, multiply this result by y, and then subtract z." What is the value of $\mp(3,5,6,3) - \mp(4,6,3,5)$?

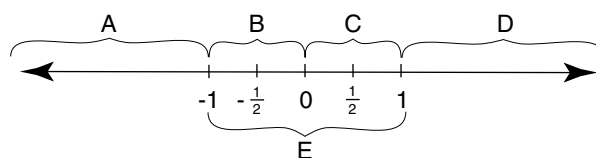**F.** 5
G. 15
H. 20
J. 45
K. 70

---

67. Twelve out of 25 students picked "The Flying Fuzz Brothers" as their favorite video game. What percentage of the class did **not** pick "The Flying Fuzz Brothers"?

A. $\frac{13}{25}\%$

B. 13%

C. 48%

D. 51%

E. 52%

---

68. The product of a nonzero integer and ⁻1 has the same value as the square of the integer. What is the integer?
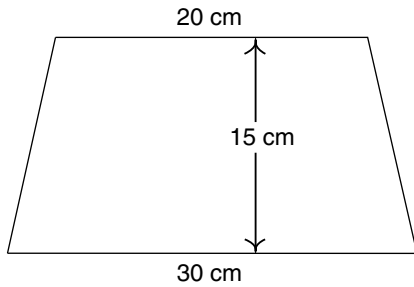
F. ⁻2
G. ⁻1
H. 0
J. 1
K. 2

69.

Which region above is the set of all possible values of $\frac{1}{x}$, where $x > 1$?

A. A
B. B
C. C
D. D
E. E

70.

What is the area of the trapezoid above?

F.   50 sq cm
G.   65 sq cm
H.   80 sq cm
J. 375 sq cm
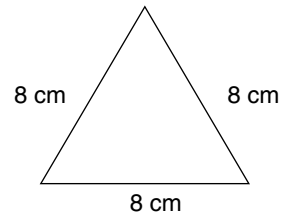K. 750 sq cm

71. For what positive value of x does
$\frac{4}{5} = \frac{x^2}{20}$?

A. 4
B. 5
C. 8
D. 16
E. 256

72. Four consecutive multiples of 10 have a sum of 300. What is the **least** of these numbers?
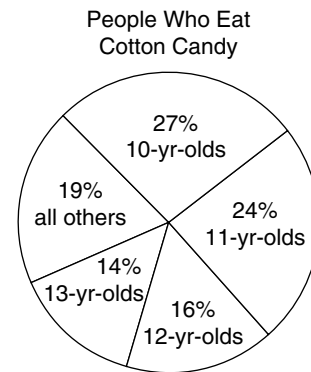
F. 20
G. 30
H. 40
J. 50
K. 60

73.

What is the area of a square that has the same perimeter as the triangle above?

A. 16 sq cm
B. 24 sq cm
C. 32 sq cm
D. 36 sq cm
E. 64 sq cm

Questions 74 and 75 refer to the chart below.

People Who Eat
Cotton Candy

74. What is the ratio of cotton candy consumption of 11-year-olds to that of 12-year-olds?

F.   2:3
G. 11:12
H.   3:2
J.   8:1
K. 40:1

75. If 10,000 pounds of cotton candy are consumed each year, how many pounds are consumed by 12-year-olds?

A. 16 lb
B. 160 lb
C. 625 lb
D. 1,600 lb
E. 120,000 lb

76.

SCHOOL EXHIBIT VISITORS

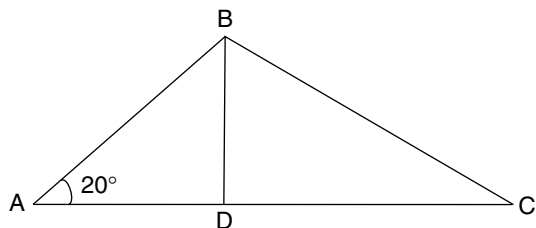| Day	1	2	3	4	5	6	7	8	9
Number of Visitors	16	21	20	17	19	21	17	21	18

According to the table above, what is the median number of visitors in the nine days?

F. $18\frac{1}{2}$

G. $18\frac{2}{9}$

H. 19
J. 20
K. 21

---

77. If $x = 14$ and $y = 11$, what is the value of $5x(x - y)$?

A. 3
B. 15
C. 67
D. 73
E. 210

78.

In the diagram above, D is a point on side AC of triangle ABC. Triangles ABD and BCD are similar. What is the measure of ∠ABC?

F. 20°
G. 70°
H. 90°
J. 110°
K. Cannot be determined from the information given.

---

79. For what value of p is $3(p - 4) = 2(p + 1)$?

A. 1
B. 2
C. 4
D. 5
E. 14

---

80. The probability of drawing a green candy from a jar of 20 candies is $\frac{1}{4}$. How many yellow candies should be added to the jar in order to reduce the probability to $\frac{1}{6}$?
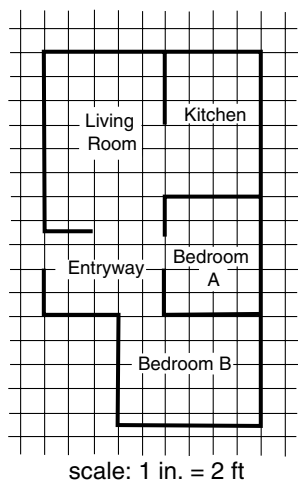
F. 3
G. 4
H. 6
J. 8
K. 10

---

81. John works 5 days a week. On Monday he completes $\frac{1}{2}$ of his week's work. On Tuesday he completes $\frac{1}{4}$ of the remainder of his work for the week. What fraction of the week's work remains to be done?

A. $\frac{1}{8}$

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

C. $\frac{1}{3}$

D. $\frac{3}{8}$

E. $\frac{3}{4}$

82.

scale: 1 in. = 2 ft

The floor plan above is drawn on a grid made up of 1-inch squares. About how many square **yards** of carpet are needed to cover bedroom B?

F. 12 sq yd
G. 27 sq yd
H. 54 sq yd
J. 81 sq yd
K. 108 sq yd

---

83. Nicki has n stamps. She has half as many stamps as Mark has. Together, Nicki and Mark have 100 more stamps than Fred. In terms of n, how many stamps does Fred have?

A. $3n - 100$

B. $3n + 100$

C. $\frac{1}{2}n + 100$

D. $n - 100$

E. $\frac{3}{2}n - 100$

84.
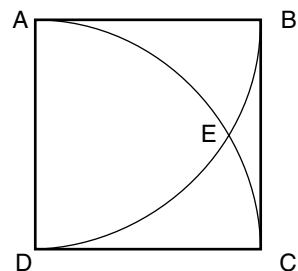
In the diagram above, ABCD is a square. AEC is an arc of a circle centered at D, and DEB is an arc of a circle centered at A. The circles intersect at E. Find the measure of ∠EAD.

F. 30°
G. 45°
H. 50°
J. 60°
K. 90°

---

85. Paula is now 4 times the age of Jill. If Jill will be 16 in 10 years, how old was Paula 4 years ago?

A. 6
B. 10
C. 16
D. 20
E. 24

---

86. In an election between two candidates, the winner received 55% of the 17,000 votes. The loser received the remaining votes. How many more votes did the winner receive than the loser?
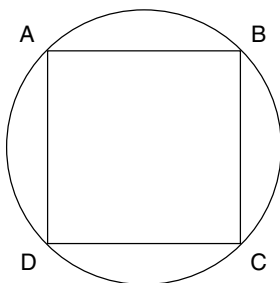
F. 500
G. 1,700
H. 3,000
J. 7,650
K. 9,350

CONTINUE ON TO THE NEXT PAGE ➤

87. Javial is packing boxes of candles for shipment. Each box can hold 15 candles. If Javial has 142 candles and fills all but the last box to capacity, how many candles will go into the last box?

   A. 7
   B. 8
   C. 10
   D. 14
   E. 22

88.

In the figure above, A, B, C, D are points on a circle and ABCD is a square. If the diagonal of the square is 16 cm long, what is the circumference of the circle?

   F. 8π
   G. 16π
   H. 32π
   J. $64\pi^2$
   K. $1,600\pi$

89. There are 660 feet in one furlong, and $\frac{1}{2}$ of a fathom in one yard. How many fathoms are there in one furlong?

   A. 55
   B. 110
   C. 220
   D. 330
   E. 440

90. If $x = 3$ and $6x(2y - 3x) = 18$, what is the value of y?

   F. 2
   G. 4
   H. 5
   J. 6
   K. 9

91.
$$\frac{n}{20} = \frac{k}{x}$$
If $n = 4$ and $k = 13$, what is the value of x?

   A. 12
   **B.** 40
   C. 52
   D. 65
   E. 80

92. Tamika's salary is $26,000. Joe's salary is $24,500. At the end of each year, Tamika is given a $500 raise and Joe is given an $800 raise. After how many years will Joe and Tamika be earning the same amount?

   F. 2
   G. 3
   H. 4
   J. 5
   K. 6

93. There are x seats in the Ralston Theater and y seats in the Baker Theater. The Baker Theater has 3 more than twice as many seats as the Ralston Theater. What is the value of y in terms of x?

   A. $x + 3$
   B. $2x + 3$
   C. $2x - 3$
   D. $3x$
   E. $3x + 3$

94.
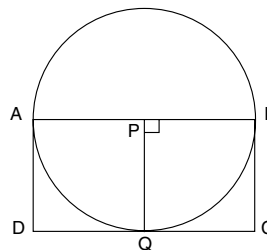
P is the center of the circle. $\overline{AB}$ is a diameter. The perimeter of rectangle ABCD is 48 cm. $\overline{PQ}$ is a radius and Q is on $\overline{CD}$. What is the area of the circle?

   F. 8π sq cm
   G. 16π sq cm
   H. 32π sq cm
   J. 64π sq cm
   K. 128π sq cm

95. $\left(\frac{1}{2} + \frac{2}{5} \right) \div \frac{2}{3} =$

    A. $\frac{2}{5}$

    B. $\frac{1}{2}$

    C. $\frac{3}{5}$

    D. $\frac{21}{20}$

    E. $\frac{27}{20}$

96. A basketball team scored 60 points in the first game and 50 in the second game. How many points did the team score in the third game if their average score for the 3 games was 51 points?

    F. 43
    G. 45
    H. 47
    J. 49
    K. 55

97. One side of a square is 10 units long and lies on the *y*-axis of a coordinate system. Another side of the square lies on the *x*-axis of the coordinate system. What must be the coordinates of one corner of this square?

    A. (0,0)
    B. (0,10)
    C. (10,0)
    D. (10,10)
    E. ($^-$10,$^-$10)

98. Of 27 marbles in a can, 7 were black, 4 were yellow, and the rest were red. Jay removed 3 black marbles, then one more marble at random. What is the probability that it was red?

    F. $\frac{1}{3}$

    G. $\frac{5}{9}$

    H. $\frac{16}{27}$

    J. $\frac{5}{8}$

    K. $\frac{2}{3}$

99. Zoe ate $\frac{1}{8}$ of a pizza. Jasmine ate twice as much of the same pizza as Zoe. What is the ratio of the amount of pizza the two ate to the amount of pizza remaining?

    A. 1:2
    B. 1:4
    C. 3:5
    D. 3:8
    E. 5:8

100. In 1960, the number of tons of solid waste produced by a city was 75 million. In 1990, the number of tons was 180 million. By what percentage did the solid waste tonnage increase from 1960 to 1990?

    F. 70%
    G. 75%
    H. 105%
    J. 140%
    K. 240%

THIS IS THE END OF THE TEST. IF TIME REMAINS, YOU MAY CHECK YOUR ANSWERS TO PART 2 AND PART 1. BE SURE THAT THERE ARE NO STRAY MARKS, PARTIALLY FILLED ANSWER CIRCLES, OR INCOMPLETE ERASURES ON YOUR ANSWER SHEET. ■