Practice Test I: Upper Level Answer Sheet

Be sure each mark completely fills the answer space.
Start with number 1 for each new section of the test. You may find more answer spaces than you need.
If so, please leave them blank.

Section 1

1 (A)(B)(C)(D)(E)   6 (A)(B)(C)(D)(E)   11 (A)(B)(C)(D)(E)   16 (A)(B)(C)(D)(E)   21 (A)(B)(C)(D)(E)
2 (A)(B)(C)(D)(E)   7 (A)(B)(C)(D)(E)   12 (A)(B)(C)(D)(E)   17 (A)(B)(C)(D)(E)   22 (A)(B)(C)(D)(E)
3 (A)(B)(C)(D)(E)   8 (A)(B)(C)(D)(E)   13 (A)(B)(C)(D)(E)   18 (A)(B)(C)(D)(E)   23 (A)(B)(C)(D)(E)
4 (A)(B)(C)(D)(E)   9 (A)(B)(C)(D)(E)   14 (A)(B)(C)(D)(E)   19 (A)(B)(C)(D)(E)   24 (A)(B)(C)(D)(E)
5 (A)(B)(C)(D)(E)   10 (A)(B)(C)(D)(E)   15 (A)(B)(C)(D)(E)   20 (A)(B)(C)(D)(E)   25 (A)(B)(C)(D)(E)

Section 2

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

Section 3

1 (A)(B)(C)(D)(E)   13 (A)(B)(C)(D)(E)   25 (A)(B)(C)(D)(E)   37 (A)(B)(C)(D)(E)   49 (A)(B)(C)(D)(E)
2 (A)(B)(C)(D)(E)   14 (A)(B)(C)(D)(E)   26 (A)(B)(C)(D)(E)   38 (A)(B)(C)(D)(E)   50 (A)(B)(C)(D)(E)
3 (A)(B)(C)(D)(E)   15 (A)(B)(C)(D)(E)   27 (A)(B)(C)(D)(E)   39 (A)(B)(C)(D)(E)   51 (A)(B)(C)(D)(E)
4 (A)(B)(C)(D)(E)   16 (A)(B)(C)(D)(E)   28 (A)(B)(C)(D)(E)   40 (A)(B)(C)(D)(E)   52 (A)(B)(C)(D)(E)
5 (A)(B)(C)(D)(E)   17 (A)(B)(C)(D)(E)   29 (A)(B)(C)(D)(E)   41 (A)(B)(C)(D)(E)   53 (A)(B)(C)(D)(E)
6 (A)(B)(C)(D)(E)   18 (A)(B)(C)(D)(E)   30 (A)(B)(C)(D)(E)   42 (A)(B)(C)(D)(E)   54 (A)(B)(C)(D)(E)
7 (A)(B)(C)(D)(E)   19 (A)(B)(C)(D)(E)   31 (A)(B)(C)(D)(E)   43 (A)(B)(C)(D)(E)   55 (A)(B)(C)(D)(E)
8 (A)(B)(C)(D)(E)   20 (A)(B)(C)(D)(E)   32 (A)(B)(C)(D)(E)   44 (A)(B)(C)(D)(E)   56 (A)(B)(C)(D)(E)
9 (A)(B)(C)(D)(E)   21 (A)(B)(C)(D)(E)   33 (A)(B)(C)(D)(E)   45 (A)(B)(C)(D)(E)   57 (A)(B)(C)(D)(E)
10 (A)(B)(C)(D)(E)   22 (A)(B)(C)(D)(E)   34 (A)(B)(C)(D)(E)   46 (A)(B)(C)(D)(E)   58 (A)(B)(C)(D)(E)
11 (A)(B)(C)(D)(E)   23 (A)(B)(C)(D)(E)   35 (A)(B)(C)(D)(E)   47 (A)(B)(C)(D)(E)   59 (A)(B)(C)(D)(E)
12 (A)(B)(C)(D)(E)   24 (A)(B)(C)(D)(E)   36 (A)(B)(C)(D)(E)   48 (A)(B)(C)(D)(E)   60 (A)(B)(C)(D)(E)

Section 4

1 (A)(B)(C)(D)(E)   6 (A)(B)(C)(D)(E)   11 (A)(B)(C)(D)(E)   16 (A)(B)(C)(D)(E)   21 (A)(B)(C)(D)(E)
2 (A)(B)(C)(D)(E)   7 (A)(B)(C)(D)(E)   12 (A)(B)(C)(D)(E)   17 (A)(B)(C)(D)(E)   22 (A)(B)(C)(D)(E)
3 (A)(B)(C)(D)(E)   8 (A)(B)(C)(D)(E)   13 (A)(B)(C)(D)(E)   18 (A)(B)(C)(D)(E)   23 (A)(B)(C)(D)(E)
4 (A)(B)(C)(D)(E)   9 (A)(B)(C)(D)(E)   14 (A)(B)(C)(D)(E)   19 (A)(B)(C)(D)(E)   24 (A)(B)(C)(D)(E)
5 (A)(B)(C)(D)(E)   10 (A)(B)(C)(D)(E)   15 (A)(B)(C)(D)(E)   20 (A)(B)(C)(D)(E)   25 (A)(B)(C)(D)(E)

Section 5

1 (A)(B)(C)(D)(E)   5 (A)(B)(C)(D)(E)   9 (A)(B)(C)(D)(E)   13 (A)(B)(C)(D)(E)
2 (A)(B)(C)(D)(E)   6 (A)(B)(C)(D)(E)   10 (A)(B)(C)(D)(E)   14 (A)(B)(C)(D)(E)
3 (A)(B)(C)(D)(E)   7 (A)(B)(C)(D)(E)   11 (A)(B)(C)(D)(E)   15 (A)(B)(C)(D)(E)
4 (A)(B)(C)(D)(E)   8 (A)(B)(C)(D)(E)   12 (A)(B)(C)(D)(E)   16 (A)(B)(C)(D)(E)

Experimental Section – See page 11 for details.

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Writing Sample

Schools would like to get to know you better through an essay or story you write using one of the two topics below. Please select the topic you find most interesting and fill in the circle next to the topic you choose.

Ⓐ Which three literary figures would you invite to dinner and why?

Ⓑ The silence was overwhelming.

Use this page and the next page to complete your writing sample.

Continue on next page.

SECTION 1
25 Questions

Following each problem in this section, there are five suggested answers. Work each problem in your head or in the blank space provided at the right of the page. Then look at the five suggested answers and decide which one is best.

Note: Figures that accompany problems in this section are drawn as accurately as possible EXCEPT when it is stated in a specific problem that its figure is not drawn to scale.

Sample Problem:

5,413	(A)	586
- 4,827	(B)	596
	(C)	696
	(D)	1,586
	(E)	1,686

● Ⓑ Ⓒ Ⓓ Ⓔ

USE THIS SPACE FOR FIGURING.

1. Jimmy plans to buy a beach ball for every one of his 13 staff members for their end-of-year party. There are three beach balls in each package. How many packages must he buy?

    (A) 2
    (B) 4
    (C) 5
    (D) 6
    (E) 10

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2. Estimate the total amount of rain that fell during 8 hours of Hurricane Irene, according to the table.

    (A) 7 cm
    (B) 13 cm
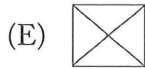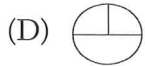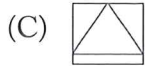   (C) 14 cm
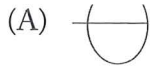   (D) 20 cm
    (E) 24 cm

Hurricane Irene

Hour	cm of rain
1	0.1
2	0.5
3	2.3
4	6.9
5	7.0
6	3.5
7	2.5
8	0.3

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

3. Which figure can be drawn without lifting the pencil or retracing?

   (A)

   (B)

   (C)

   (D)

   (E)

---

4. Jennifer earns a base hourly rate of $8 per hour at her job. However, if she works more than 10 hours in a week, she earns $9 per hour for each hour she works after the first 10 hours. How much money does Jennifer earn if she works 16 hours in one week?

   (A) $128
   (B) $134
   (C) $135
   (D) $138
   (E) $144

---

5. Fred has a sticks more than Annie. Annie has 7 sticks. How many sticks does Fred have?

   (A) $a - 7$
   (B) $7 + a$
   (C) $\frac{a}{7}$
   (D) $7 - a$
   (E) $\frac{7}{a}$

---

6. A small cube has a side length of 2 inches. How many small cubes are needed to make a larger cube whose base has a perimeter of 32 inches?

   (A) 8
   (B) 16
   (C) 32
   (D) 64
   (E) 192

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

7. Which of the following could be the value of A if $\frac{1}{5} + A > 1$?

   (A) $\frac{1}{5}$

   (B) $\frac{2}{5}$

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

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

   (E) $\frac{9}{10}$

Questions 8-9 are based on the table in the figure.

8. The fractional part of the number of biologists employed in education in year X was approximately

   (A) $\frac{1}{4}$

   (B) $\frac{7}{20}$

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

   (D) $\frac{3}{5}$

   (E) $\frac{7}{10}$

9. If the number of engineers in the United States in year X was 30,000, approximately what was the difference in the number of engineers in government and the number in education?

   (A) 5,000

   (B) 6,000

   (C) 7,000

   (D) 15,000

   (E) 22,500

HOW SCIENTISTS AND ENGINEERS WERE EMPLOYED
IN THE UNITED STATES IN YEAR X
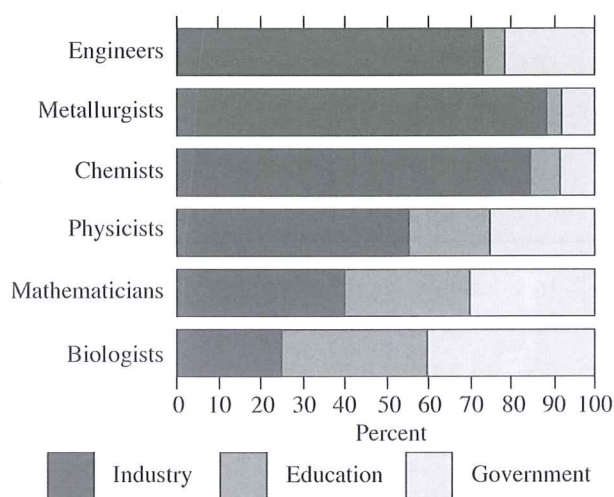
GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

10. Heather is collecting dimes. She saves one dime on the first day, two dimes on the second day, and three dimes on the third day. If this pattern continues, how much money will Heather have saved at the end of 30 days?

    (A) $45.50
    (B) $46.00
    (C) $46.10
    (D) $46.50
    (E) $47.50

11. When $A + B = 13$ and $2D + B = 13$, what is the value of D?

    (A) 13
    (B) 5
    (C) –5
    (D) –7
    (E) It cannot be determined from the information given.

12. In the figure, segment PQ is 45 centimeters long. How long is segment RQ?

    (A) 15 cm
    (B) 18 cm
    (C) 24 cm
    (D) 27 cm
    (E) 30 cm
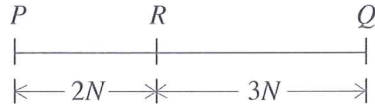
$$\frac{87,412}{3,024} =$$

13. The result of the above calculation is closest to which of the following?

    (A) 30
    (B) 2,900
    (C) 30,000
    (D) 85,000
    (E) 90,000

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

14. The mass required to trigger a mouse trap is 157g. What is the largest mass of cheese a 4 oz. mouse could carry and not set off the trap? (1 oz. = 28g)

(A) 28g

(B) 44g

(C) 45g

(D) 56g

(E) 112g

15. $\sqrt[4]{a^9}$ =

(A) $36a$

(B) a^3

(C) a^5

(D) a^{36}

(E) $(a^2)\sqrt[4]{a}$

16. If 30% of a number is 150, then 70% of that same number is

(A) 70

(B) 100

(C) 190

(D) 350

(E) 2100

17. If the points $(4, 2)$ and $(-1, k)$ are on a line that is perpendicular to the line $y = 2x + 1$, what is the value of k?
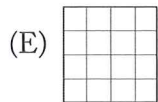
(A) $-\frac{1}{2}$

(B) $-\frac{7}{2}$

(C) $\frac{9}{2}$

(D) $\frac{7}{2}$

(E) 12

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

18. The figure shows an L-shaped triple. Which game board can be completely covered by placing L-shaped triples on the board without overlapping?

(A)

(B)

(C)

(D)

(E)
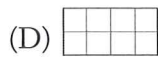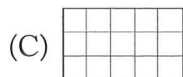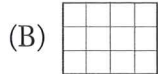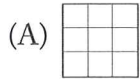
19. A circle, a square, and an equilateral triangle all have the same perimeter. Which of the following lists the shapes in increasing order of area?

(A) circle, square, triangle
(B) circle, triangle, square
(C) triangle, circle, square
(D) square, triangle, circle
(E) triangle, square, circle

20. A parking lot owner sold 20% of the area of his lot to his neighbor. Later that year he sold 20% of the remainder of his lot to another neighbor. What percent of his original parking area does he now have?

(A) 16%
(B) 40%
(C) 60%
(D) 64%
(E) 80%

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

21. If the dots in the figure shown are connected by starting at 1 and then going to 2, it will be necessary to retrace a line or lift the pencil to draw which figure?

(A)

(B)

(C)

(D)

(E)
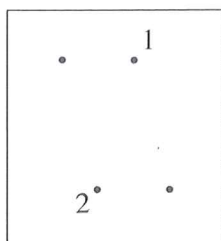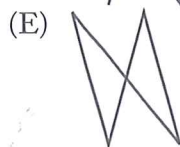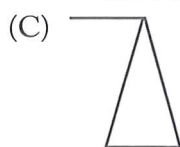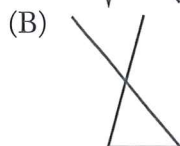
22. If 60 percent of t is 8, what is 30 percent of $2t$?

(A) 2
(B) 4
(C) 8
(D) 16
(E) 24

23. Let x be an integer such that $1 < x < 12$. What is the probability that x is divisible by 3 but NOT divisible by 2?

(A) $\frac{1}{6}$
(B) $\frac{1}{5}$
(C) $\frac{3}{10}$
(D) $\frac{1}{3}$
(E) $\frac{7}{10}$

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

24. If the average of five consecutive whole numbers is 18, what is the smallest number?

   (A) 8
   (B) 12
   (C) 16
   (D) 17
   (E) 18

25. A movie theater has an average of 400 customers per day. To increase business, the owner plans to reduce the regular price from $8.00 to $6.00 before 6 p.m. each day. If 100 people pay $8.00, how many people must pay $6.00 if daily sales are to remain the same as before the $6.00 price reduction plan?

   (A) 360
   (B) 400
   (C) 420
   (D) 480
   (E) 500

STOP
**IF YOU FINISH BEFORE TIME IS CALLED,
YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT TURN TO ANY OTHER SECTION IN THE TEST.**

SECTION 2
40 Questions

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

Mr. Duffy lived in Chapelizod because he wished to live as far as possible from the city of which he was a citizen and because he found all other suburbs of Dublin mean, modern, and pretentious. He had been for many years cashier of a private bank in Baggot Street. Every morning he came in from Chapelizod by streetcar. At midday
Line 5 he went to Dan Burke's and took his lunch—a bottle of lager beer and a small trayful of arrowroot biscuits. At four o'clock he was set free. He dined in an eating house on George's Street where he felt himself safe from the society of Dublin's gilded youth and where there was a certain plain honesty in the bill of fare. His evenings were spent either before his landlady's piano or roaming about the outskirts of the city. His liking
10 for Mozart's music brought him sometimes to an opera or a concert. These were the only dissipations of his life.

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1. The author's primary purpose in the passage is to
   (A) resolve a plot
   (B) create suspense
   (C) describe city life
   (D) describe a scene
   (E) describe a character

2. Why did Mr. Duffy prefer Chapelizod to the other suburbs of Dublin?
   (A) It was closer to Dan Burke's.
   (B) It offered modern conveniences.
   (C) It was where his business was located.
   (D) It was a place where he was not known.
   (E) It was unpretentious and remote from Dublin.

3. Mr. Duffy's chief diversion apparently was
   (A) work
   (B) music
   (C) travel
   (D) the theater
   (E) good company

4. As he is described in the passage, Mr. Duffy appears to be
   (A) cruel
   (B) degenerate
   (C) a creature of habit
   (D) a remorseful person
   (E) a man of many interests

GO ON TO THE NEXT PAGE.

Being small, solitary, herbivorous, and cuddly has not been much help to the koala. Long before it could blame its troubles on an airline advertising campaign, the two-foot tall Australian marsupial was hunted almost to extinction for its furry pelt. Only since the koala was declared a protected species in the late 1920's has it made something of a comeback. So
Line 5   perhaps the koala could be forgiven for thinking that life might be more bearable if it was closer to the size of a real bear.

In fact, it once was. Rooting around a southern Australian cave in 1985, spelunker Graham Pilkington uncovered a fossilized jaw fragment of a creature later identified as a giant koala, which probably inhabited the continent more than 1 million years ago. The
10   jawbone and front molars are about twice the size of those of a present-day koala. This suggests that the creature was more than three feet tall and weighed between 45 and 65 pounds. Not exactly a grizzly bear, but about two to three times as heavy as modern koalas.

Still, as the curator of fossils at the South Australian Museum explains, this larger size may have been a mixed blessing. Although the giant koala was perhaps better equipped to
15   ward off foes, it probably subsisted on the same diet of eucalyptus leaves its descendants favor. Not all eucalyptus branches could have supported that much weight, so dining out could have been an adventure for a giant koala. Worse still, late in the Pleistocene period, a series of droughts ravaged southeastern Australia, wiping out many species including the giant koala. Hardier and requiring less sustenance, only smaller members of the koala family survived.

5. The author's use of which of the following words is an example of a pun?

(A) solitary (line 1)
(B) hunted (line 3)
(C) pelt (line 3)
(D) bearable (line 5)
(E) favor (line 15)

6. In which of the following does the author speak of the koala as if it were human?

(A) "Being small, solitary, herbivorous, and cuddly has not been much help to the koala."
(B) "The koala could be forgiven for thinking that life might be more bearable if it were closer to the size of a real bear."
(C) "The jawbone and front molars are about twice the size of those of a present-day koala."
(D) "This larger size may have been a mixed blessing."
(E) "It probably subsisted on the same diet of eucalyptus leaves its descendants favor."

7. "Rooting around" (line 7) could be replaced by which of the following without changing the author's meaning?

(A) Camping near
(B) Hurrying through
(C) Striding toward
(D) Falling into
(E) Poking about

8. In line 15, "its" refers to the

(A) grizzly bear
(B) South Australian Museum
(C) giant koala
(D) eucalyptus leaf
(E) diet

9. The passage contains information to answer which of the following questions?

(A) How many front molars did the giant koala have?
(B) How long ago did the giant koalas probably live in Australia?
(C) How did the giant koala defend itself against its enemies?
(D) What were the pelts of koalas used for?
(E) What are the troubles that the present-day koala blames on an airline advertising campaign?

10. According to the passage, which of the following is true of the giant koalas?

(A) They were not able to climb eucalyptus trees.
(B) They were less than two feet tall.
(C) They were frequently attacked by other animals.
(D) They became extinct during the Pleistocene period.
(E) They became a protected species in the 1920's.

GO ON TO THE NEXT PAGE.

Many people suppose the situation in an operating room to be like this: the atmosphere is tense; scarcely a word is spoken. The surgeon dominates the entire room with a powerful personality and expresses with authority quiet, terse commands, "Scalpel!"– "Scissors!"–"Sponge!"–"Hemostat!" The rest of the team say nothing, but

Line 5 carry out the orders like automatons.

An operating room actually is not at all like this. What is happening is that the changing needs of the patient, as they develop in the course of the operation, determine what everybody does. When a surgical team has worked long enough together to develop true teamwork, each member has such a grasp of the total situation and his or

10 her role in it that the needs of the patient give unequivocal orders.

A small artery is cut and begins to bleed. In a chain-of-command organization, the surgeon would note this and say to the attendant, "Stop that bleeder." The assistant in turn would say to the surgical nurse, "Give me a hemostat," and thus, coordinated effort would be achieved. What actually happens is that the bleeder gives a simultaneous

15 command to all three members of the team, all of whom have been watching the progress of the operation with equal attention. It says to the surgeon, "Get your hand out of the way until this is controlled." It says to the instrument nurse, "Get a hemostat ready," and it says to the assistant, "Clamp that off." This is the highest and most efficient type of cooperation known. It is possible only where every member of the team

20 knows enough about the total job and that of each other member to see the relationship of what he or she does to everything else that goes on.

11. In an operating room, the course of an operation depends mostly on the

(A) patient
(B) surgeon
(C) surgical nurse
(D) instrument nurse
(E) surgeon's assistant

12. A hemostat is used to

(A) soak up blood
(B) stitch a wound
(C) cut blood vessels
(D) clamp off blood vessels
(E) hold the surgeon's hand steady

13. Which of the following qualities is most desirable for the head of a surgical team?

(A) a powerful personality
(B) an authoritative voice
(C) the ability to give forceful orders
(D) a thorough knowledge of surgery
(E) the ability to get along with patients

14. The actual clamping off of arteries during an operation is apparently the job of the

(A) surgeon
(B) surgical team
(C) surgical nurse
(D) instrument nurse
(E) surgeon's assistant

15. This passage was probably written to

(A) describe a particular operation
(B) correct a false idea about operating room procedures
(C) enumerate the conditions necessary for good teamwork
(D) instruct surgeons as to the best way to control bleeding in a patient
(E) instruct new members of a surgical team on operating room procedures

GO ON TO THE NEXT PAGE.

The following speech was delivered by Susan B. Anthony at her trial in 1873.

> Friends and fellow-citizens: I stand before you tonight under indictment for the alleged crime of having voted at the last Presidential election [1872], without having a lawful right to vote. It shall be my work this evening to prove to you that in thus voting, I not only committed no crime, but, instead, simply exercised my citizen's rights, guaranteed
>
> *Line 5* to me and all United States citizens by the National Constitution.
>
> It was we, the people; not we, the White male citizens; nor yet we, the male citizens; but we, the whole people, who formed the Union. And we formed it, not to give the blessings of liberty, but to secure them; not to the half of ourselves but to the whole people—women as well as men. And it is a downright mockery to talk to women of their
>
> *10* enjoyment of the blessings of liberty, while they are denied the use of the only means of securing them …—the ballot….
>
> The only question left to be settled now is: Are women persons? And I hardly believe any of our opponents will have the hardihood to say they are not. Being persons, then, women are citizens; and no State has a right to make any law, or to enforce any old law, that
>
> *15* shall abridge their privileges or immunities.

16. In line 1, Anthony's use of "fellow-citizens" is ironic for which of the following reasons?

    (A) She was not fully a citizen because she had no right to vote.
    (B) The audience included people not of her sex, race, or religion.
    (C) Most of the citizens in the audience were females.
    (D) Those in the audience who were her friends were not necessarily citizens.
    (E) At that time women were not allowed to make speeches on public issues.

17. What does Anthony mean by "I stand before you tonight under indictment" (line 1)?

    (A) She had been framed by her opponents.
    (B) She was already in jail.
    (C) She had been falsely accused of voting in the last election.
    (D) She was on trial and might be sent to prison.
    (E) She had been allowed to speak by special permission.

18. How does Anthony's speech reflect the idea in a speech by Abraham Lincoln in which he defended "government of the people, by the people, for the people"?

    (A) It points out that all citizens should be able to elect their government.
    (B) It shows that educated women can solve the problems of government.

    (C) It shows that women can have only a theoretical interest in affairs of state.
    (D) It shows that by voting Anthony was overreaching her rights as a citizen.
    (E) It demonstrates that laws in violation of the Constitution are null and void.

19. Why does Anthony say that women's right to vote is guaranteed by the Constitution?

    (A) The Constitution explicitly gave women the right to vote.
    (B) One of the blessings of liberty is being allowed to vote.
    (C) The Constitution gave states the power to authorize women to vote.
    (D) Only children and criminals were denied the right to vote.
    (E) The Constitution begins, "We, the people," which includes women.

20. The purpose of Anthony's speech was to

    (A) influence the women on the jury in her favor
    (B) prove that the right to vote would produce racial equality
    (C) demonstrate that she and other women had the right to vote
    (D) convince people of the need for economic justice: equal pay for equal work
    (E) convince the jury that voting was only a tool to be used by women to gain other rights

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Approximately 28 percent of all energy used in the United States is devoted to transportation and of that fraction, 40 percent is supplied in the form of gasoline to fuel the nation's nearly 255 million registered passenger vehicles. Americans use more energy to fuel their cars than they do for any other single purpose. The fuel used by

Line 5   American automobiles and personal trucks would just about fill all the energy needs of Japan, a nation of over 127 million and the world's largest consumer of energy after the United States and China. In an urgent effort to reduce consumption of an increasingly costly fuel whose chief reserves lie overseas, the government has rightly identified the American automobile and current habits of its utilization as prime targets for change.

21. This passage was probably taken from

(A) a historical novel
(B) a speech in a play
(C) an editorial analysis
(D) a gasoline commercial
(E) a government contract

22. According to the passage, Japan's gasoline consumption is

(A) equal to that of China
(B) 127 million gallons a year
(C) equal to that of the United States
(D) less than that of the United States
(E) larger than that of any other country

23. This passage is mostly about

(A) energy needs of Japan
(B) alternative energy sources
(C) car sales in the United States
(D) the extent of oil reserves overseas
(E) gasoline consumption in the United States

24. The passage provides information to answer which of the following questions?

(A) How can current driving habits in the United States be changed?
(B) How many Chinese have automobiles or personal trucks?
(C) What proportion of United States energy is used for transportation?
(D) How are various countries meeting their energy needs?
(E) When will the world's oil supply run out?

GO ON TO THE NEXT PAGE.

Line 5

10

15

The plan which I adopted, and the one by which I was most successful, was that of making friends of all the little white boys whom I met in the street. As many of these as I could, I converted into teachers. With their kindly aid, obtained at different times and in different places, I finally succeeded in learning to read. When I was sent on errands, I always took my book with me, and by going one part of my errand quickly, I found time to get a lesson before my return. I used also to carry bread with me, enough of which was always in the house, and to which I was always welcome; for I was much better off in this regard than many of the poor white children in our neighborhood. This bread I used to bestow upon the hungry little urchins, who, in return, would give me that more valuable bread of knowledge. I am strongly tempted to give the names of two or three of those little boys, as a testimonial of the gratitude and affection I bear them; but prudence forbids;—not that it would injure me, but it might embarrass them; for it is almost an unpardonable offence to teach slaves to read in this Christian country. It is enough to say of the dear little fellows, that they lived on Philpot Street, very near Durgin and Bailey's ship-yard. I used to talk this matter of slavery over with them. I would sometimes say to them, I wished I could be as free as they would be when they got to be men. "You will be free as soon as you are twenty-one,—but I am a slave for life!—Have not I as good a right to be free as you have?" These words used to trouble them; they would express for me the liveliest sympathy, and console me with the hope that something would occur by which I might be free.

25. In lines 9-10 the phrase "that more valuable bread of knowledge" is an example of

(A) hyperbole
(B) metaphor
(C) allegory
(D) synecdoche
(E) personification

26. In line 11, "prudence" most likely means

(A) fear
(B) caution
(C) indifference
(D) pragmatism
(E) carelessness

27. In referring to "this Christian country" (line 13), the author's tone is

(A) ironic
(B) pleasant
(C) forgiving
(D) charitable
(E) superficial

28. The passage implies that the author considers literacy to be the equivalent of

(A) food
(B) liberty
(C) religion
(D) teaching
(E) friendship

29. Which of the following most accurately states the main idea of the passage?

(A) It was socially acceptable for white and black children to interact.
(B) The author discovered an effective alternative to formalized education.
(C) The author was able to trick the children, demonstrating his superior intellect.
(D) The author, though a slave, encountered exceptional children; this was not the norm.
(E) The strong Christian values in America compensated for the difficulties the author encountered because of slavery.

GO ON TO THE NEXT PAGE.

I am not sure that I can draw an exact line between wit and humor, but I am positive that humor is the more comfortable and livable quality. Humorous persons, if their gift is genuine, are always agreeable companions and they sit through the evening best. They have pleasant mouths turned up at the corners. To those corners the great Master of marionettes

Line 5   has fixed the strings and holds them with nimble fingers that twitch them at the slightest jest. But the mouth of a merely witty person is hard and sour until the moment of its discharge. Nor is the flash from a witty person always comforting, whereas a humorous person radiates a general pleasure and is like another candle in the room.

30. According to the author, a humorous person is like

    (A) an expensive gift
    (B) a loaded gun
    (C) an unusual puppet
    (D) a comforting light
    (E) a mechanical toy

31. The author uses the analogy of marionettes to illustrate that humorous people

    (A) are never forgotten
    (B) smile frequently
    (C) control their companions
    (D) surprise their friends
    (E) attract many friends

32. The author implies that witty people are likely to make remarks that are

    (A) sentimental
    (B) emotional
    (C) displeasing
    (D) irrelevant
    (E) explanatory

33. Which of the following best expresses the author's main point?

    (A) It is more pleasant to be with humorous people than with witty people.
    (B) Humor is more difficult to achieve than wit.
    (C) Humorous people make friends easily.
    (D) Humor and wit are genuine gifts.
    (E) Witty people are not usually humorous, but humorous people are usually witty.

GO ON TO THE NEXT PAGE.

Improvements in technology, in the tools and crafts men employ in making a living, have too often been ignored by the historical annalist. Farmers, carpenters, and miners live on a different level from philosophers, poets, and historians; the invention of the wheelbarrow, the windmill, and the horse collar were innovations of little interest
Line 5   to scholars on their high, intellectual plateau. This gulf between theory and practice, between those who labor and those who think, has perverted the writing of history, giving it a one-sided, intellectualized interpretation. The humanists, for instance, when they peered backward from the fifteenth century, concluded that the thousand years following the collapse of Roman rule had been a dark age. It seemed so to them because
10   arts and letters and other manifestations of the high intellectual tradition had declined when the Roman Empire in the West disintegrated and had not revived until their own day.

Had the humanists paid more attention to technological developments, they might have modified their conception of the "dark ages," for the practical inventive
15   genius of the European peoples continued to function although the Roman Empire dissolved. Medieval craftsmen devised and introduced labor-saving devices which even the Greeks and Romans had failed to invent when their civilization was flourishing so brilliantly in the thousand years between 600 BCE and 400 CE. In some respects medieval society was neither static nor stagnant despite the contempt the humanists conceived for it.

34. Which of the following is the author's main point?
   (A) It is impossible ever to bridge the gulf between scientists and humanists.
   (B) Medieval society was intellectually inferior to that of the preceding Roman Empire.
   (C) The writing of history should emphasize intellectual activities rather than technological developments.
   (D) It is possible for historians to present an inaccurate view of civilizations because of their intellectual bias.
   (E) The inventions of the Greeks and Romans provided the ideas for labor-saving devices of medieval times.

35. In the author's opinion, medieval civilization was superior to the Greek and Roman civilizations in the area of
   (A) painting
   (B) philosophy
   (C) technology
   (D) government
   (E) the writing of history

36. According to the author, the fifteenth-century humanists considered the preceding thousand years to be a "dark age" (line 14) because
   (A) intellectual accomplishments did not flourish
   (B) labor-saving devices had not yet been invented
   (C) the level of technological development was so low
   (D) the years prior to Roman rule had been so brilliant
   (E) the laborers and the philosophers could not communicate with one another

37. The author apparently believes that historical accounts would be more accurate if
   (A) history was written solely for humanists
   (B) technology was subordinated to philosophy
   (C) historians were required to define their terms
   (D) technological developments were not ignored
   (E) intellectual endeavors were taken into account

GO ON TO THE NEXT PAGE.

I have seen a baby canary two days out of the nest take a bath in the water where I had been soaking seeds, and a thorough job he did of it, too! Once finished, he dried his face by wiping it, his tail by shaking it, and his wings by picking the drops of water with his bill. You could hardly believe it, even though you knew it was just his ghostly,

Line 5   departed relatives working through him.

38. Which of the following is probably true of the young canary?

   (A) He knew how to bathe by instinct.

   (B) He took his first bath entirely by accident.

   (C) He was a figment of the writer's imagination.

   (D) He was introduced to the water by the writer.

   (E) He had taken several baths before the writer saw him.

39. The writer's reaction to watching the young canary take a bath is one of

   (A) reverence

   (B) sympathy

   (C) amazement

   (D) amusement

   (E) indifference

40. What does the author mean when he says, "it was just his ghostly, departed relatives working through him" (lines 4-5)?

   (A) The canary's relatives looked after him while he bathed.

   (B) The bird was taught how to take a bath before he left the nest.

   (C) Even though the canary's mother had left, she was still watching over him.

   (D) The canary was taking a bath more out of fear than a desire to be clean.

   (E) The canary was acting according to his inherited ability to take care of himself.

STOP
**IF YOU FINISH BEFORE TIME IS CALLED,
YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT TURN TO ANY OTHER SECTION IN THE TEST.**

SECTION 3
60 Questions

This section consists of two different types of questions: synonyms and analogies. There are directions and a sample question for each type.

Synonyms
Each of the following questions consists of one word followed by five words or phrases. You are to select the one word or phrase whose meaning is closest to the word in capital letters.

Sample Question:

CHILLY:
(A) lazy
(B) nice
(C) dry
(D) cold
(E) sunny

Ⓐ Ⓑ Ⓒ ● Ⓔ

1. COLLABORATE:
   (A) settle
   (B) embroider
   (C) forge ahead
   (D) pass sentence
   (E) work together

2. AILMENT:
   (A) illness
   (B) arrival
   (C) affection
   (D) ignorance
   (E) enthusiasm

3. MEMENTO:
   (A) script
   (B) badge
   (C) souvenir
   (D) directory
   (E) engraving

4. JEOPARDIZE:
   (A) liberate
   (B) improvise
   (C) endanger
   (D) simonize
   (E) implicate

5. FIASCO:
   (A) regret
   (B) calculation
   (C) inexperience
   (D) total failure
   (E) thorough dejection

6. COLOSSAL:
   (A) limp
   (B) huge
   (C) close
   (D) sweet
   (E) smooth

7. FLAMBOYANT:
   (A) showy
   (B) certain
   (C) aggressive
   (D) independent
   (E) accommodating

8. EMPATHY:
   (A) pathos
   (B) apathy
   (C) telepathy
   (D) forcefulness
   (E) understanding

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9. EXHILARATE:
   (A) expel
   (B) repeat
   (C) excite
   (D) discuss
   (E) display

10. ENCUMBER:
    (A) repel
    (B) burden
    (C) agitate
    (D) disprove
    (E) disappoint

11. JEER:
    (A) avoid
    (B) desert
    (C) call for
    (D) scoff at
    (E) take from

12. RETORT:
    (A) sharp answer
    (B) naive question
    (C) deafening shout
    (D) arrogant demand
    (E) careless error

13. MEDLEY:
    (A) mood
    (B) motive
    (C) mixture
    (D) mastery
    (E) measure

14. DUBIOUS:
    (A) useful
    (B) devious
    (C) honest
    (D) doubtful
    (E) synchronous

15. CALLOW:
    (A) small
    (B) elderly
    (C) unseen
    (D) wooden
    (E) unsophisticated

16. INSTIGATE:
    (A) do without
    (B) stir up
    (C) cry out
    (D) try again
    (E) go along

17. DEBILITATED:
    (A) charged
    (B) released
    (C) annoyed
    (D) weakened
    (E) intolerant

18. IDIOSYNCRASY:
    (A) inquiring attitude
    (B) illogical conclusion
    (C) instinctive reaction
    (D) impressive cunning
    (E) individual peculiarity

19. SIMULATE:
    (A) pause
    (B) hinder
    (C) reform
    (D) include
    (E) pretend

20. LORE:
    (A) sound judgment
    (B) undivided attention
    (C) organized resistance
    (D) traditional knowledge
    (E) complicated arrangement

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21. CULTIVATE:
    (A) create
    (B) nurture
    (C) activate
    (D) neglect
    (E) landscape

22. QUALM:
    (A) decree
    (B) captivity
    (C) violation
    (D) misgiving
    (E) obligation

23. TENTATIVE:
    (A) hurried
    (B) enticing
    (C) uncertain
    (D) excited
    (E) thoughtless

24. PRECOCIOUS:
    (A) quick
    (B) erratic
    (C) valuable
    (D) advanced
    (E) dangerous

25. BURGEON:
    (A) profit
    (B) debase
    (C) flourish
    (D) extract
    (E) galvanize

26. ACUMEN:
    (A) humor
    (B) malice
    (C) intellect
    (D) ignorance
    (E) optimism

27. IMPRUDENT:
    (A) irritated
    (B) sluggish
    (C) awkward
    (D) foolhardy
    (E) incoherent

28. ABORIGINAL:
    (A) unique
    (B) hateful
    (C) flexible
    (D) essential
    (E) primordial

29. BRANDISH:
    (A) burn
    (B) mark
    (C) boast
    (D) wave
    (E) quarrel

30. RAZE:
    (A) clutter
    (B) unhook
    (C) demolish
    (D) minimize
    (E) counteract

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Analogies

The following questions ask you to find relationships between words. For each question, select the answer choice that best completes the meaning of the sentence.

Sample Question:

> Kitten is to cat as
> (A) fawn is to colt
> (B) puppy is to dog
> (C) cow is to bull
> (D) wolf is to bear
> (E) hen is to rooster   Ⓐ ● Ⓒ Ⓓ Ⓔ

Choice (B) is the best answer because a kitten is a young cat just as a puppy is a young dog. Of all the answer choices, (B) states a relationship that is most like the relationship between <u>kitten</u> and <u>cat</u>.

---

31. Menu is to foods as
    (A) sign is to roads
    (B) digest is to stories
    (C) magazine is to editions
    (D) catalog is to merchandise
    (E) encyclopedia is to volumes

32. Milk is to butter as
    (A) jelly is to bread
    (B) shirt is to clothes
    (C) wood is to paper
    (D) factory is to mill
    (E) vegetable is to colander

33. Photography is to images as
    (A) painting is to talent
    (B) sculpture is to forms
    (C) knitting is to dexterity
    (D) caricature is to etchings
    (E) statistics is to mathematics

34. Eternity is to time as
    (A) deity is to religion
    (B) credulity is to love
    (C) infinity is to number
    (D) community is to size
    (E) maternity is to motherhood

35. Teacher is to assignment as doctor is to
    (A) disease
    (B) hospital
    (C) operation
    (D) stethoscope
    (E) prescription

36. Farmer is to cook as
    (A) barber is to tailor
    (B) rancher is to miner
    (C) physician is to dentist
    (D) plumber is to electrician
    (E) lumberjack is to carpenter

37. Creep is to run as
    (A) fall is to dive
    (B) trickle is to pour
    (C) shift is to change
    (D) anchor is to moor
    (E) recoil is to bounce

38. Copious is to abundant as docile is to
    (A) bulk
    (B) meek
    (C) temper
    (D) dominant
    (E) momentous

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39. Calendar is to days as
    (A) caliper is to density
    (B) odometer is to aroma
    (C) sundial is to sunlight
    (D) fluoroscope is to light
    (E) chronometer is to time

40. Avarice is to greed as
    (A) fury is to anger
    (B) stream is to pond
    (C) flurries is to blizzard
    (D) insight is to epiphany
    (E) laughter is to delight

41. Shelter is to protection as
    (A) pane is to window
    (B) bed is to blanket
    (C) picture is to wall
    (D) curtain is to privacy
    (E) lampshade is to brightness

42. Evict is to home as
    (A) bewitch is to magic
    (B) conjure is to amulet
    (C) possess is to treasure
    (D) banish is to country
    (E) charm is to location

43. Paroled is to pardoned as conditional is to
    (A) absolute
    (B) corrupted
    (C) improbable
    (D) annihilated
    (E) manipulated

44. Nonfiction is to biography as fiction is to
    (A) essay
    (B) history
    (C) novel
    (D) editorial
    (E) autobiography

45. Capitulate is to surrender as
    (A) insinuate is to pause
    (B) prevaricate is to flatter
    (C) remonstrate is to protest
    (D) attenuate is to strengthen
    (E) amalgamate is to separate

46. Contract is to individuals as
    (A) treaty is to nations
    (B) license is to permits
    (C) cohesion is to unions
    (D) marriage is to proposal
    (E) alliance is to permanence

47. Prune is to eradicate as
    (A) write is to edit
    (B) infer is to criticize
    (C) abbreviate is to delete
    (D) condense is to abridge
    (E) assume is to conclude

48. Discovering is to cache as
    (A) overlooking is to fact
    (B) overhearing is to secret
    (C) overhauling is to engine
    (D) overpaying is to employee
    (E) overthrowing is to government

49. Glare is to light as
    (A) stare is to vision
    (B) blaze is to smoke
    (C) blare is to sound
    (D) power is to steam
    (E) motion is to speed

50. Competent is to worker as
    (A) pleasant is to artist
    (B) bright is to dancer
    (C) fluent is to speaker
    (D) dignified is to general
    (E) orderly is to professor

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51. Paint is to corrosion as grease is to

    (A) friction
    (B) flotation
    (C) rotation
    (D) contraction
    (E) combustion

52. Stoicism is to endurance as

    (A) awe is to astonishment
    (B) inspiration is to expiration
    (C) commitment is to despair
    (D) resolution is to anger
    (E) primary is to secondary

53. Hinge is to door as

    (A) ink is to pen
    (B) lock is to key
    (C) bulb is to lamp
    (D) bell is to tower
    (E) fulcrum is to lever

54. Song is to playlist as

    (A) verse is to prose
    (B) ditty is to sonnet
    (C) art is to museum
    (D) trumpet is to brass
    (E) poem is to anthology

55. Consume is to devour as

    (A) warn is to alert
    (B) shove is to push
    (C) pursue is to follow
    (D) suspend is to expel
    (E) upset is to annoy

56. Drizzle is to downpour as

    (A) rain is to trickle
    (B) storm is to drought
    (C) kindle is to blaze
    (D) minute is to hour
    (E) primary is to secondary

57. Flowery is to prose as

    (A) realistic is to film
    (B) obscene is to humor
    (C) rhythmic is to music
    (D) ornate is to furniture
    (E) historical is to uniform

58. Contort is to straighten as

    (A) twist is to shout
    (B) devour is to eat
    (C) obscure is to darken
    (D) entangle is to streamline
    (E) complicate is to obfuscate

59. Commission is to appointment as

    (A) mission is to trip
    (B) emission is to car
    (C) fission is to science
    (D) admission is to ticket
    (E) intermission is to break

60. Autograph is to pen as

    (A) calf is to cow
    (B) bait is to lure
    (C) danger is to harm
    (D) data is to calculator
    (E) thermometer is to temperature

STOP
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SECTION 4
25 Questions

Following each problem in this section, there are five suggested answers. Work each problem in your head or in the blank space provided at the right of the page. Then look at the five suggested answers and decide which one is best.

<u>Note:</u> Figures that accompany problems in this section are drawn as accurately as possible EXCEPT when it is stated in a specific problem that its figure is not drawn to scale.

Sample Problem:

5,413	(A)	586
- 4,827	(B)	596
	(C)	696
	(D)	1,586
	(E)	1,686

● Ⓑ Ⓒ Ⓓ Ⓔ

USE THIS SPACE FOR FIGURING.

1. Two numbers whose difference is 8 add up to 50. Identify the smaller number.

   (A) 21
   (B) 22
   (C) 23
   (D) 28
   (E) 29

2. If $50 \times A = 50$, then $50 - A =$

   (A) 0
   (B) $\frac{1}{50}$
   (C) 1
   (D) 51
   (E) 49

3. $200 - 7\frac{15}{16} =$

   (A) $192\frac{1}{16}$
   (B) $192\frac{15}{16}$
   (C) $193\frac{1}{4}$
   (D) $193\frac{15}{16}$
   (E) 194

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

4. A rope $7\frac{1}{4}$ feet long can be cut into how many pieces each 3 inches long?

(A) 8
(B) 15
(C) 21
(D) 22
(E) 29

5. $0.040 \times 100.00 =$

(A) 0.04
(B) 0.4
(C) 4.0
(D) 40
(E) 400

6. If $X > 4$, then $3X + 6$ could be

(A) 15
(B) 16
(C) 17
(D) 18
(E) 19

7. Find the quotient of 6.2 and 0.31.

(A) $\frac{1}{20}$
(B) $\frac{1}{2}$
(C) 2
(D) 20
(E) 200

8. The average height of two boys is 5.2 feet and the average height of four girls is 4.9 feet. What is the average height, in feet, of all six children?

(A) 3.83
(B) 4.8
(C) 4.9
(D) 5
(E) 5.05

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

9. All of the following products are equal EXCEPT

(A) $1 \times \frac{1}{4}$

(B) $2 \times \frac{1}{8}$

(C) $4 \times \frac{1}{16}$

(D) $5 \times \frac{1}{20}$

(E) $6 \times \frac{10}{24}$

10. What is the value of the greatest of four consecutive integers if the least minus twice the greatest equals 8?

(A) −14

(B) −11

(C) −2

(D) 1

(E) 4

Questions 11-12 refer to the graph.

11. What fraction of the Taylors' monthly income is spent for food?

(A) $\frac{1}{10}$

(B) $\frac{3}{20}$

(C) $\frac{1}{5}$

(D) $\frac{1}{4}$

(E) $\frac{3}{10}$

12. The amount the Taylors spend for taxes, Social Security, and pensions is what percent of the amount they spend for house payments, heat, and electricity?

(A) 30%

(B) 50%

(C) 60%

(D) 80%

(E) 90%

HOW THE TAYLORS SPEND THEIR
MONTHLY INCOME
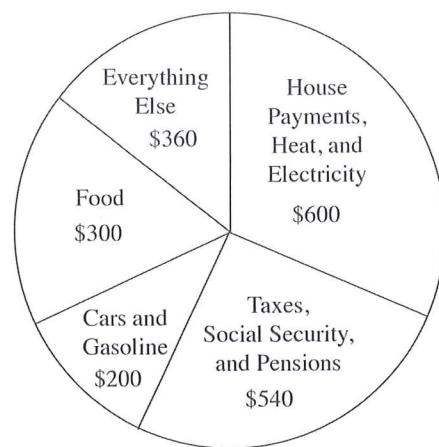
13. Mr. Kocher paid $30,000 for a rectangular lot 1,200 feet wide and 1,600 feet long. What was his approximate cost per square foot?

(A) 1.6¢

(B) 16¢

(C) $1.60

(D) $6.10

(E) $16.00

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

14. One staple weighs 31 mg. If a box of staples holds 250 staples, how many grams does the whole box of staples weigh?

    (A) 6.75
    (B) 7.75
    (C) 67.5
    (D) 77.5
    (E) 7,750

15. A truck driver took between $5\frac{1}{2}$ and 6 hours to make a 350-mile trip. The average speed, in miles per hour, must have been between

    (A) 48 and 50
    (B) 50 and 55
    (C) 55 and 58
    (D) 59 and 63
    (E) 64 and 100

16. $\dfrac{4x^{-3}z}{2^{-2}y^4w^{-2}} =$

    (A) $\dfrac{2y^4z}{x^{-3}w^{-2}}$

    (B) $\dfrac{2z}{x^3y^4w^2}$

    (C) $\dfrac{8w^2z}{x^3y^4}$

    (D) $\dfrac{16w^2z}{x^3y^4}$

    (E) $\dfrac{w^2z}{x^3y^4}$

17. $6\overline{)936} =$

    (A) $\dfrac{900}{6} \times \dfrac{30}{6} \times \dfrac{6}{6}$

    (B) $\dfrac{900}{6} + \dfrac{30}{6} + \dfrac{6}{6}$

    (C) $\dfrac{90}{6} + \dfrac{36}{6}$

    (D) $\dfrac{900}{6} + 36$

    (E) $\dfrac{9}{6} + \dfrac{3}{6} + \dfrac{6}{6}$

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

18. Combine and simplify:

$(5x^3 + 7x - 3) - (x^3 - 2x^2 + 7x - 8)$

(A) $4x^3 - 2x^2 + 14x - 11$

(B) $4x^3 - 2x^2 - 11$

(C) $4x^3 + 2x^2 - 14x + 5$

(D) $4x^3 + 2x^2 - 11$

(E) $4x^3 + 2x^2 + 5$

19. Which of the following gives the number of cents in a dimes, n nickels, and 2 quarters?

(A) $\frac{a}{10} + \frac{n}{5} + 50$

(B) $\frac{10}{a} + \frac{5}{n} + 50$

(C) $a + 10n + 2$

(D) $10a + 5n + 50$

(E) $10a + 50n + 5$

20. In the figure, C is the center of the circle and $\angle ACB$ is right. Vertices A and B of the triangle are on the circle. If the area of the triangle ACB is 8, then what is the area of the shaded region?

(A) $8 - 4\pi$

(B) $4\pi - 8$

(C) $16\pi - 8$

(D) $8\pi - 8$

(E) It cannot be determined from the information given.
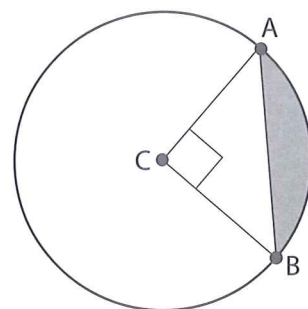
21. A rectangular prism has a volume of 288 cubic meters. What are its dimensions?

(A) 12m by 6m by 2m

(B) 12m by 12m by 4m

(C) 8m by 8m by 4m

(D) 8m by 9m by 4m

(E) 4m by 7m by 9m

GO ON TO THE NEXT PAGE.

USE THIS SPACE FOR FIGURING.

22. Simplify the variable expression: $\dfrac{15g^2v^3z}{35gv^2z}$

    (A) $\dfrac{gv}{3}$

    (B) $\dfrac{3}{7gv}$

    (C) $\dfrac{3gv}{7}$

    (D) $\dfrac{3g^3v^5z^2}{7}$

    (E) $\dfrac{5gv}{7z}$

23. In a survey, each of 500 people was found to have a checking account, a savings account, or both. If 300 of these people have checking accounts and 300 have savings accounts, how many people have both a checking account and a savings account?

    (A) 50

    (B) 100

    (C) 150

    (D) 250

    (E) 300

24. Grandma's Soup Company packages tomato soup that serves four in cylindrical cans having a base diameter of 8 cm and a height of 10 cm. It wants to introduce the soup in single-serving cans as well. If the company keeps the height of the new can at 10 cm, what should its new base diameter equal?

    (A) 1

    (B) $\sqrt{2}$

    (C) 2

    (D) 4

    (E) $2\sqrt{2}$

25. If $a > 1$, which of the following is greatest?

    (A) $3a + 1$

    (B) $a + 1$

    (C) $a - 1$

    (D) $\dfrac{a}{a} + 1$

    (E) $a + \dfrac{1}{a}$

STOP
**IF YOU FINISH BEFORE TIME IS CALLED,
YOU MAY CHECK YOUR WORK ON THIS SECTION ONLY.
DO NOT TURN TO ANY OTHER SECTION IN THE TEST.**

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