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.

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

● (B) (C) (D) (E)

1. If $J - 10 = 9$, then $J - 11 =$

   USE THIS SPACE FOR FIGURING.

   (A) 1
   (B) 8
   (C) 9
   (D) 10
   (E) 11

2. If 5 out of 20 students in a class wear glasses, what percentage of the students wear glasses?

   (A) 5%
   (B) 15%
   (C) 25%
   (D) 20%
   (E) 50%

GO ON TO THE NEXT PAGE.

3. Mr. Taylor has a budget of $100.00 to buy sketch books. What is the greatest number of sketch books he can buy if the sketch books cost $7.00 each?

   (A) 10
   (B) 12
   (C) 13
   (D) 14
   (E) 15

4. If $250 + \text{☀} - 1 = 350$, what does ☀ equal?

   (A) 99
   (B) 100
   (C) 101
   (D) 105
   (E) 250

5. Meg goes for a run 3 times per week, and she runs for an average of 27 minutes each time. On average, how long does Meg run each week?

   (A) 54 minutes
   (B) 1 hour, 11 minutes
   (C) 1 hour, 21 minutes
   (D) 1 hour, 29 minutes
   (E) 2 hours, 1 minute

6. Colleen's stock had a value of x dollars at the beginning of the week. During the week, her stock went up 1 dollar, and then dropped 3 dollars. At the end of the week, Colleen's stock was equal to

   (A) $x + 1$ dollars
   (B) $x - 1$ dollars
   (C) $x - 2$ dollars
   (D) $x + 2$ dollars
   (E) $x - 3$ dollars

7. If a shirt on sale for 50% off costs $15.00, the original price of the shirt was

(A) $7.50
(B) $20.00
(C) $25.00
(D) $30.00
(E) $45.00

8. If j is 3 times h, then h must be

(A) $^1/_3$ of j
(B) 3 more than j
(C) 3
(D) 3 times j
(E) 3 less than j

9. $12 \times \left(\frac{2}{12} - \frac{1}{4}\right) =$

(A) -1
(B) $\frac{1}{12}$
(C) 1
(D) 6
(E) 24

10. If two times a number is greater than 7, then the number could be all of the following EXCEPT

(A) $3\frac{1}{2}$
(B) $3\frac{3}{4}$
(C) 4
(D) $4\frac{1}{2}$
(E) 5

Questions 11-13 are based on the graph in Figure 1.

11. What is the average amount the baseball team raised per quarter?

    (A) $30
    (B) $40
    (C) $45
    (D) $55
    (E) $60

12. In total, how much money did all three teams raise during the fourth quarter?
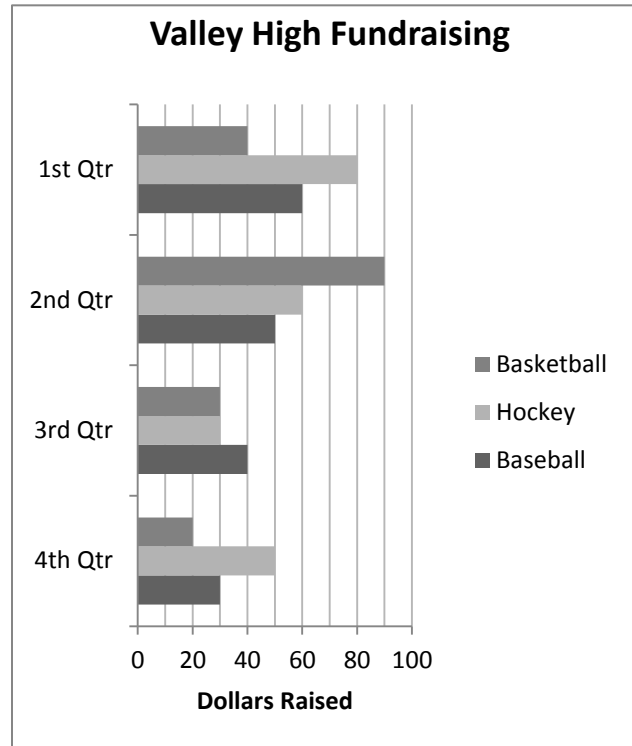
    (A) $75
    (B) $80
    (C) $90
    (D) $100
    (E) $150

13. Over all four quarters, the total funds raised by the basketball team were what fraction of the total funds raised by the hockey team?

    (A) $2/3$
    (B) $3/5$
    (C) $4/5$
    (D) $9/11$
    (E) $10/11$

Figure 1

14. Emily is eating her colored candies in the following pattern: one green, one blue, one red, one orange, one brown, one green, and so on. If this pattern continues, the 27th candy that she eats will be

(A) green
(B) red
(C) orange
(D) brown
(E) blue

15. If $6 + (J \times 8) = 11$, then $J =$

(A) $3/8$
(B) $1/2$
(C) $5/8$
(D) 3
(E) 6

16. In Figure 2, each of the polygon's sides has a length of x. Which expression represents the perimeter of the polygon?

(A) $6x$
(B) $6 + x$
(C) $6 - x$
(D) $6/x$
(E) 6×6
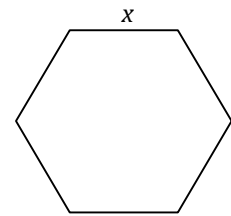

Figure 2

17. Which of the following is closest to $1/2$?

    (A) $3/6$

    (B) $5/8$

    (C) $0/9$

    (D) $19/20$

    (E) $1^2/3$

18. Which figure CANNOT be drawn without lifting the pencil or retracing?

A)

B)

C)

D)
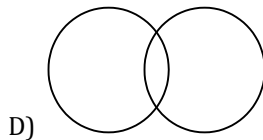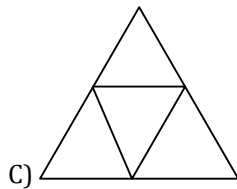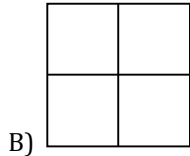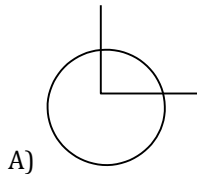
    (E) All of the figures above can be drawn without lifting the pencil or retracing.

19. A pastry chef can bake 200 cupcakes every 50 minutes. At that rate, how long will it take the chef to bake 768 cupcakes?

    (A) 2 hours, 30 minutes
    (B) 2 hours, 48 minutes
    (C) 3 hours, 12 minutes
    (D) 3 hours, 48 minutes
    (E) 12 hours, 8 minutes

20. For any integer A, which of the following expressions has the greatest value?

    (A) $A - 3$
    (B) $A - 1$
    (C) A
    (D) $A + 1$
    (E) $A + 3$

21. If $5x + 25$ is less than 27, then x could equal

    (A) 0
    (B) 1
    (C) 5
    (D) 20
    (E) 25

22. In Figure 3, *EFGH* is a square. What is the area of the UNSHADED region?
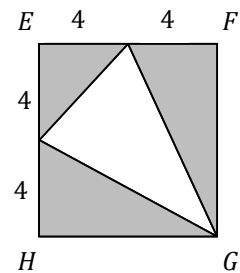
    (A) 8
    (B) 12
    (C) 16
    (D) 24
    (E) 28

Figure 3

Ivy Global

23. David and John raised money during an 8-hour telethon to support cancer research. David raised $150.00/hour for the first two hours, and then $80.00/hour for the remaining six hours. John raised $170.00/hour for the first three hours, and then $75.00/hour for the remaining five hours. What is the difference between the amount of money raised by David and John?

(A) $15.00
(B) $10.00
(C) $105.00
(D) $110.00
(E) $115.00

24. The perimeter of a rectangle is 30 inches. If the length of the rectangle is 12 inches, then the width of the rectangle is

(A) 2 inches
(B) 3 inches
(C) 4 inches
(D) 6 inches
(E) 18 inches

25. The average test score of three students in a class is 81 points. If one student's score goes up by 2 points, one student's score goes up by 4 points, and the other student's score remains the same, what will be the new average test score of the three students?

(A) 81 points
(B) 83 points
(C) 84 points
(D) 86 points
(E) 87 points

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.