

1) Which of the following statements is true?

- A.  $20\% = .20 = \frac{1}{5}$
- B.  $78\% = .78 = \frac{7}{8}$
- C.  $35\% = .35 = \frac{1}{3}$
- D.  $55\% = .11 = \frac{11}{20}$

2) Which statement is true?

- A.  $-12 < -8$
- B.  $-18 > -13$
- C.  $7 < -10$
- D.  $0 > 6$

3) A pair of jeans costing \$39.50 is on sale for 25% off. Of the following, which amount is closest to the sale price?

- A. \$9.88
- B. \$14.50
- C. \$25.00
- D. \$29.50

4) If 9 out of 24 students failed the test, what percent passed?

- A. 50%
- B. 62.5%
- C. 37.5%
- D. 46.7%

5) If 6.4% of  $n = 1.28$ , then  $n = ?$

- A. 64
- B. 48
- C. 96
- D. none of these

6)  $(\frac{-48}{-12})(6) + 5 = \underline{\hspace{2cm}}$

- A. 24
- B. 19
- C. 21
- D. 37

7)  $-4 \cdot -2 =$

- A. 8
- B. -8
- C. -2
- D. 2

8)  $3^3 + 2(5+8) - (6-2)^2$

- A. 127
- B. 37
- C. 27
- D. 19

9) What is the solution to the following equation?  $48 = w - 6$

- A.  $w = 8$
- B.  $w = 42$
- C.  $w = 54$
- D.  $w = 288$

10) Don earns \$5/hour for babysitting. His total earnings for babysitting last week were \$75. Which equation below could be used to find the number of hours Don spent babysitting last week? (*let h represent the total # of hours Don spent babysitting last week*)

- A.  $5 \cdot h = 75$
- B.  $75 \cdot h = 5$
- C.  $h = 75 + 5$
- D.  $h = 75 \cdot 5$

11) The moon is approximately 240,000 miles from the earth. What is the distance written in scientific notation?

- A.  $2.4 \times 10^4$
- B.  $24 \times 10^4$
- C.  $2.4 \times 10^5$
- D.  $24 \times 10^5$

12) Tim has a piece of wood that is  $16\frac{1}{2}$  inches long. If he cuts off  $5\frac{3}{8}$  inches, how many inches is the remaining piece?

- A.  $11\frac{1}{8}$  inches
- B.  $11\frac{1}{4}$  inches
- C.  $9\frac{1}{8}$  inches
- D.  $11\frac{2}{6}$  inches

13) The prime factorization of 36 is:

- A.  $2^3 \times 3^3$
- B.  $2^2 \times 3^2$
- C.  $3^3 \times 2^2$
- D.  $2^3 \times 3^2$

14) What is the next number in the pattern?

1, 4, 9, 16, \_\_\_\_

- A. 25
- B. 32
- C. 36
- D. 64

15) What is the sum of  $x(y - z)$  and  $x(y + z)$  when  $x = 4$ ,  $y = 5$ , and  $z = -1$ ?

- A. 48
- B. 32
- C. 24
- D. 40

16) If  $3y + 7 = 22$ , what is the value of  $y$ ?

- A. 3
- B. 5
- C. 8
- D. 15

17) Which set represents a set of integers?

A.  $\{1, 2\frac{1}{2}, 3\}$

B.  $\{0, 1, 2\}$

C.  $\{-2, 1, 2.4\}$

D.  $\{\frac{2}{3}, 0, 1\}$

18)  $+6 + ^{-}8 - ^{-}9$  equals:

A.  $+5$

B.  $-11$

C.  $+7$

D.  $+11$

19) Sue is 6 years older than Traci. Together their ages equal 32. Which equation can be used to find their ages?

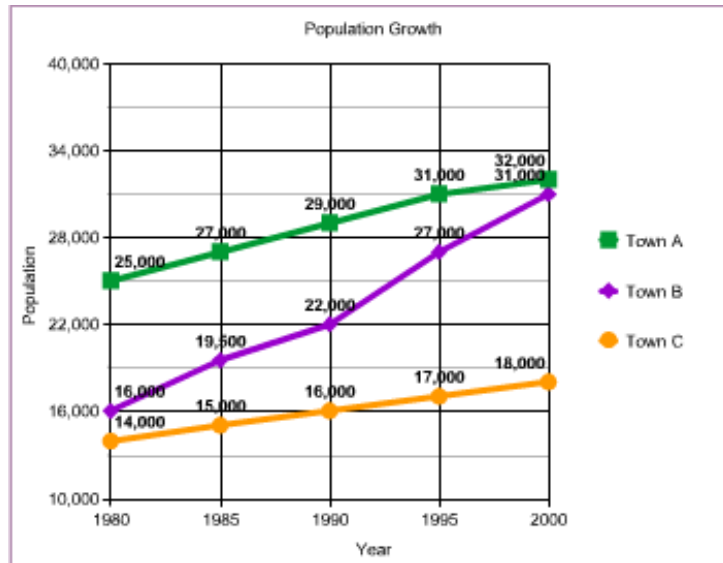
A.  $t + 6 = 32$

B.  $2t + 6 = 32$

C.  $t - 6 = 32$

D.  $6 + (t \div 2) = 32$

The graph below shows the population growth three towns.



20) Based on the graph above, which town probably has the highest population in 2005?

- A. Town A
- B. Town B
- C. Town C
- D. Town D

21) Based on the graph from item # 20, what is the average (mean) population growth per year for Town B?

- A. 750 per year
- B. 1000 per year
- C. 2500 per year
- D. 3750 per year

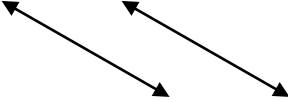
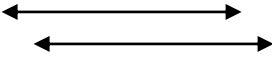
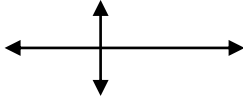
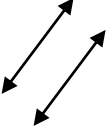
22) If  $t$  must be an integer, what is the solution set for  $3t - 5 > 7$ ?

- A.  $\{4, 3, 2, 1, \dots\}$
- B.  $\{3, 2, 1, \dots\}$
- C.  $\{5, 6, 7, 8, \dots\}$
- D.  $\{4, 5, 6, \dots\}$

23) Which of the following sets of numbers are rational?

- A.  $\sqrt{1}$ ,  $\sqrt{2}$ ,  $\sqrt{4}$
- B.  $\sqrt{25}$ ,  $\sqrt{50}$ ,  $\sqrt{100}$
- C.  $\sqrt{100}$ ,  $\sqrt{400}$ ,  $\sqrt{800}$
- D.  $\sqrt{1}$ ,  $\sqrt{81}$ , 3.14

24) Which of these are intersecting lines?

- A. 
- B. 
- C. 
- D. 

25) The stem and leaf plot below shows the test scores for a group of students.

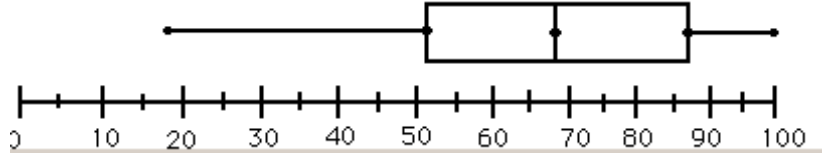
**Test Scores**

9	1, 2, 2, 5, 6, 7
8	3, 4, 4, 6
7	2, 5, 6, 9, 9
6	4, 7, 9, 9

How many students scored higher than 80?

- A. 4
- B. 6
- C. 7
- D. 10

26) A box-and-whisker plot has been used to represent a set of data.



Based on the box-and-whisker plot, what is the median of the set of data?

- A. Approximately 18
- B. Approximately 52
- C. Approximately 68
- D. Approximately 86

27) What is the volume of a rectangular prism with a length of 15 inches, width of 12 inches, and height of 8 inches?

- A.  $35 \text{ in.}^3$
- B.  $96 \text{ in.}^3$
- C.  $180 \text{ in.}^3$
- D.  $1440 \text{ in.}^3$

28) Given cards labeled 

P
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E
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A
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C
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E
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, what is the probability of drawing a C, which is not replaced, and then drawing a vowel?

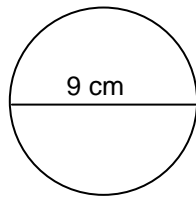
- A.  $\frac{3}{20}$
- B.  $\frac{3}{25}$
- C.  $\frac{4}{20}$
- D.  $\frac{4}{25}$

29)  $5!$  is equal to:

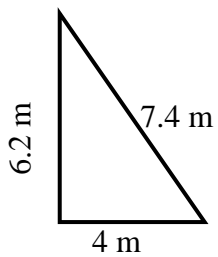
- A. 5
- B. 20
- C. 60
- D. 120

30) Which of the following is closest to the area of the circle below?

- A.  $20 \text{ cm}^2$
- B.  $64 \text{ cm}^2$
- C.  $81 \text{ cm}^2$
- D.  $254 \text{ cm}^2$



31) Find the area of the triangle below.



- A) 17.6 m
- B)  $24.8 \text{ m}^2$
- C)  $12.4 \text{ m}^2$
- D)  $183.52 \text{ m}^2$



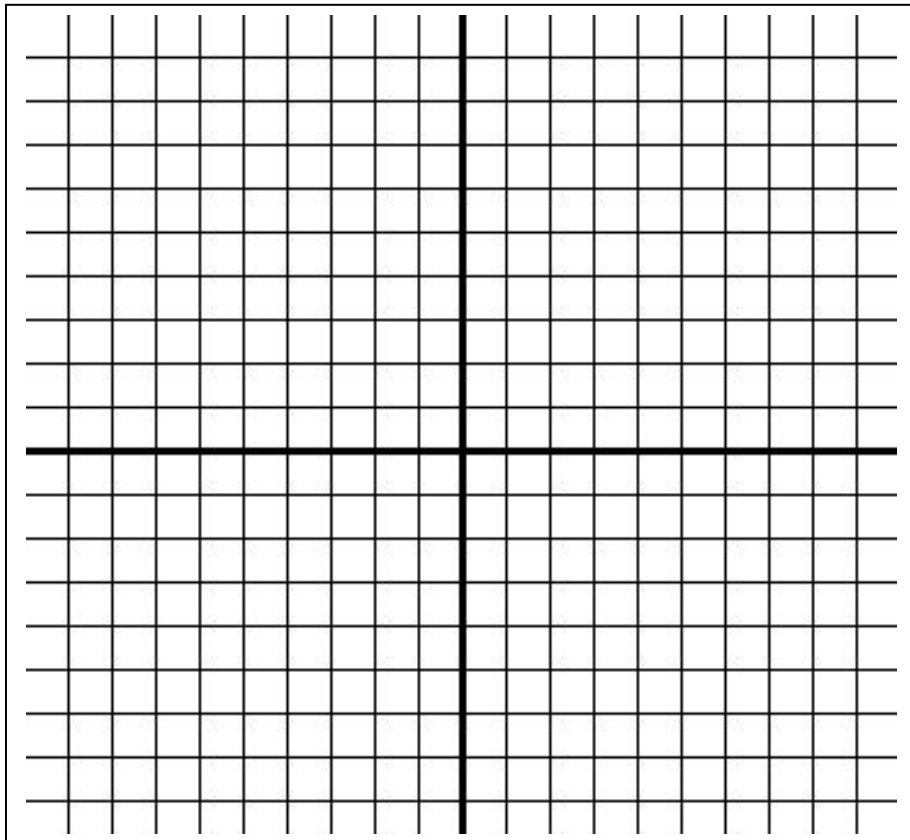
32) Use the following equation to answer each part of question 32.

$$y = -2x + 3$$

A. One point that lies on the line is shown in the table below. Find 2 more points that are on the line and list them in the table.

x	y
2	-1

B. On the grid below, label the x- and y- axis.



C. Graph the line  $y = -2x + 3$  on the coordinate plane above.