

1) Which of the following statements is true?

A.  $40\% = .4 = \frac{2}{5}$

B.  $78\% = .78 = \frac{7}{8}$

C.  $35\% = .35 = \frac{1}{3}$

D.  $55\% = .11 = \frac{11}{20}$

2) Which statement is true?

A.  $-10 < -7$

B.  $-15 > -10$

C.  $8 < -11$

D.  $0 > 4$

3) A pair of jeans costing \$31.50 is on sale for 25% off. Of the following, which amount is closest to the sale price?

A. \$7.88

B. \$6.50

C. \$25.00

D. \$23.50

4) If 12 out of 32 students failed the test, what percent passed?

A. 50%

B. 62.5%

C. 37.5%

D. 46.7%

5) If 3.2% of  $n = 1.28$ , then  $n = ?$

A. 132

B. 96

C. 192

D. none of these

6)  $(\frac{-36}{-12})(6) + 6 = \underline{\hspace{2cm}}$

A. 18

B. 12

C. 0

D. 24

7)  $-5 \cdot 3 =$

- A. 15
- B. -15
- C. -2
- D. 2

8)  $2^3 + 2(7 + 4) - (7 - 3)^2$

- A. 104
- B. 14
- C. 20
- D. 80

9) What is the solution to the following equation?  $56 = w - 8$

- A.  $w = 7$
- B.  $w = 48$
- C.  $w = 64$
- D.  $w = 448$

10) Don earns \$5/hour for babysitting. His total earnings for babysitting last week were \$80. 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.  $5 \cdot h = 80$
- B.  $80 \cdot h = 5$
- C.  $h = 80 + 5$
- D.  $h = 80 \cdot 5$

11) The moon is approximately 230,000 miles from the earth. What is the distance written in scientific notation?

- A.  $2.3 \times 10^4$
- B.  $23 \times 10^4$
- C.  $2.3 \times 10^5$
- D.  $23 \times 10^5$

12) Tim has a piece of wood that is  $17\frac{1}{2}$  inches long. If he cuts off  $5\frac{3}{8}$  inches, how many inches is the remaining piece?

- A.  $12\frac{1}{8}$  inches
- B.  $12\frac{1}{4}$  inches
- C.  $10\frac{1}{8}$  inches
- D.  $12\frac{2}{6}$  inches

13) The prime factorization of 72 is:

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

14) What is the next number in the pattern?

1, 8, 27, 64, \_\_\_\_

- A. 125
- B. 128
- C. 216
- D. 1728

15) What is the sum of  $x(y - z)$  and  $x(y + z)$  when  $x = 3$ ,  $y = 4$ , and  $z = -2$ ?

- A. 36
- B. 18
- C. 12
- D. 24

16) If  $4y + 6 = 30$ , what is the value of  $y$ ?

- A. 3
- B. 6
- C. 9
- D. 12

17) Which set represents a set of integers?

A.  $\{4, 5\frac{1}{2}, 6\}$

B.  $\{0, 3, 5\}$

C.  $\{-3, 5, 6.4\}$

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

18)  $+7 + ^{-}8 - ^{-}9$  equals:

A.  $+6$

B.  $-10$

C.  $+8$

D.  $+10$

19) Sue is 7 years older than Traci. Together their ages equal 34. Which equation can be used to find their ages?

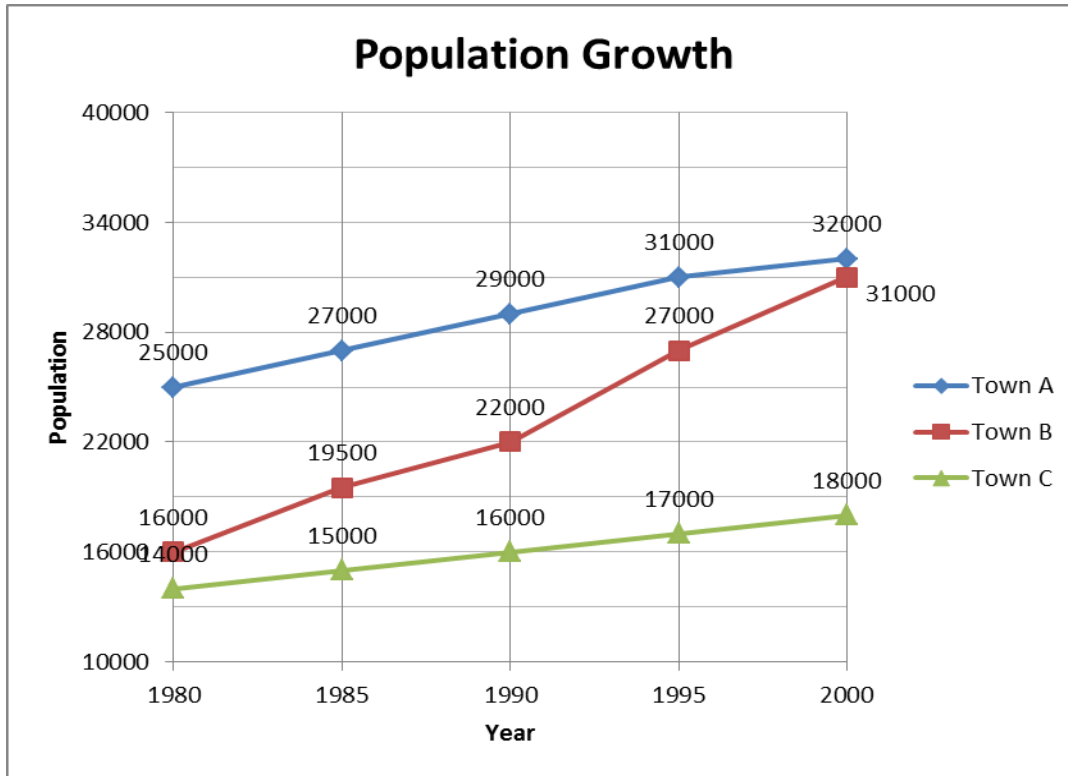
A.  $t + 7 = 34$

B.  $2t + 7 = 34$

C.  $t - 7 = 34$

D.  $7 + (t \div 2) = 34$

The graph below shows the population growth three towns.



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

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

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

- A. 350 per year
- B. 1000 per year
- C. 2000 per year
- D. 7000 per year

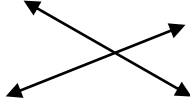
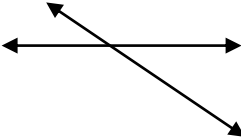

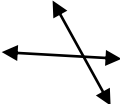
22) If  $t$  must be an integer, what is the solution set for  $5t - 3 > 7$ ?

- A.  $\{2, 1, 0, -1, \dots\}$
- B.  $\{1, 0, -1, \dots\}$
- C.  $\{3, 4, 5, 6, \dots\}$
- D.  $\{2, 3, 4, \dots\}$

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

- A.  $\sqrt{1}$ ,  $\sqrt{3}$ ,  $\sqrt{4}$
- B.  $\sqrt{25}$ ,  $\sqrt{50}$ ,  $\sqrt{100}$
- C.  $\sqrt{100}$ ,  $\sqrt{400}$ ,  $\sqrt{800}$
- D.  $\sqrt{25}$ ,  $\sqrt{81}$ , 3.14

24) Which of these are parallel lines?

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

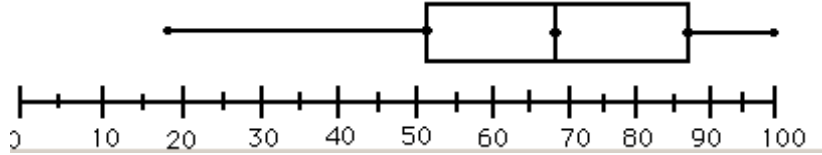
25) The stem and leaf plot below shows the test scores for a group of students.

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 lower than 70?

- A. 9
- B. 13
- C. 2
- D. 4

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 range of the set of data?

- A. Approximately 52 to 86
  - B. Approximately 18 to 68
  - C. Approximately 18 to 100
  - D. Approximately 52 to 100
- 27) What is the volume of a rectangular prism with a length of 25 inches, width of 10 inches, and height of 4 inches?

- A.  $39 \text{ in.}^3$
- B.  $40 \text{ in.}^3$
- C.  $65 \text{ in.}^3$
- D.  $1000 \text{ in.}^3$

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 P, which is replaced, and then drawing a vowel?

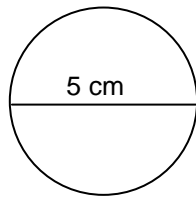
- A.  $\frac{3}{25}$
- B.  $\frac{3}{20}$
- C.  $\frac{4}{20}$
- D.  $\frac{4}{25}$

29)  $4!$  is equal to:

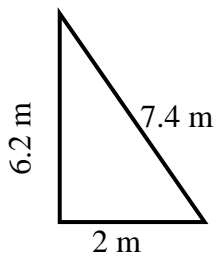
- A. 4
- B. 10
- C. 12
- D. 24

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

- A.  $10 \text{ cm}^2$
- B.  $20 \text{ cm}^2$
- C.  $25 \text{ cm}^2$
- D.  $79 \text{ cm}^2$



31) Find the area of the triangle below.



- A) 15.6 m
- B)  $12.4 \text{ m}^2$
- C)  $6.2 \text{ m}^2$
- D)  $91.76 \text{ m}^2$



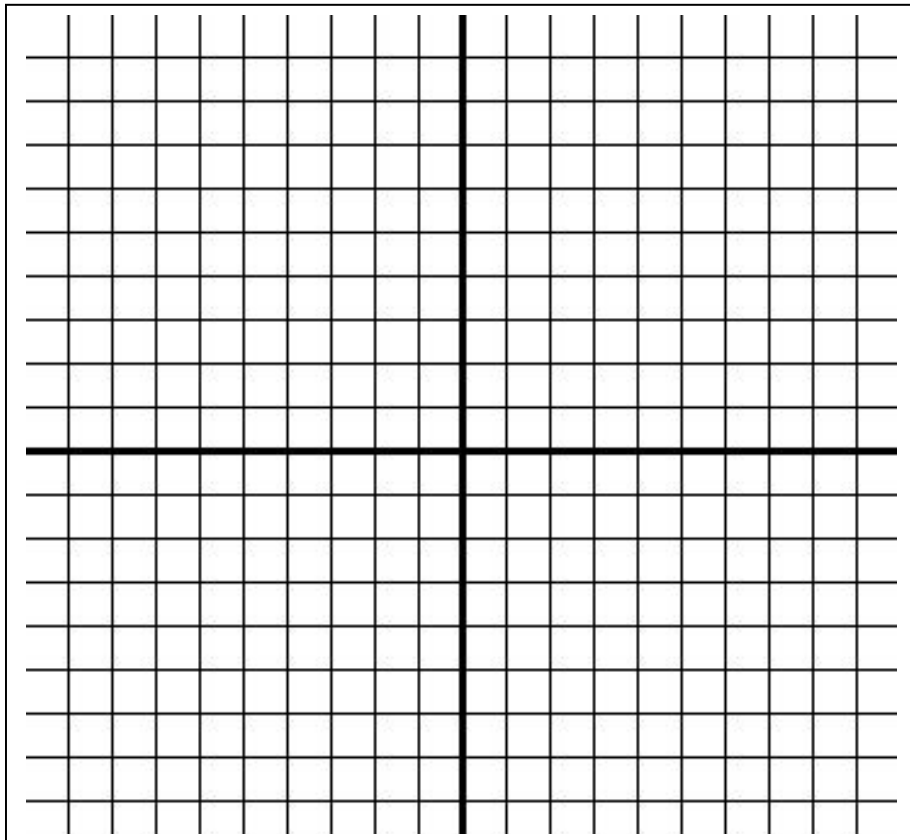
32) Use the following equation to answer each part of question 32.

$$y = -2x + 5$$

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  $y = -2x + 5$  on the coordinate plane above.