

7<sup>th</sup> Grade Math Readiness

1. At 7 P.M. the temperature was  $5^{\circ}\text{F}$ . At midnight the temperature was  $-7^{\circ}\text{F}$ . What was the change in temperature?

A  $-12^{\circ}\text{F}$                       C  $5^{\circ}\text{F}$   
 B  $-7^{\circ}\text{F}$                          D  $12^{\circ}\text{F}$

2. What is the product of  $-12(-5)$ ?

A  $-60$                             C  $48$   
 B  $-48$                             D  $60$

3. What is true about the relationship between miles and gallons?

<b>gallons</b>	2	4	6	8
<b>miles</b>	30	60	90	120

- A There is no relationship between miles and gallons.  
 B There is a proportional relationship between miles and gallons.  
 C There is a 1 to 15 relationship between miles and gallons.  
 D There is a 30 to 1 relationship between miles and gallons.

4. Which decimal is equivalent to  $\frac{4}{20}$ ?

A 0.2                                C 1.4  
 B 0.6                                D 4.2

5. At the farmers' market, you can buy 3 jars of honey for \$12, 6 jars of honey for \$24, or 9 jars of honey for \$36. What is the constant of proportionality for buying jars of honey?

A 3                                    C 6  
 B 4                                    D 12

6. Andrella makes bead bracelets. Each bracelet is 7 inches long. Andrella has a 67-inch length of beaded string. How many necklaces can she make?

A 7 necklaces                      C 10 necklaces  
 B 9 necklaces                      D 11 necklaces

7. The ground temperature at sea level is  $60^{\circ}\text{F}$ . For every 100-foot increase in elevation, the temperature rises  $\frac{1}{10}$  of one degree. At an altitude of 2,000 feet, what will be the likely temperature?

A  $58^{\circ}\text{F}$                             C  $72^{\circ}\text{F}$   
 B  $62^{\circ}\text{F}$                             D  $80^{\circ}\text{F}$

8. Tamara walked  $\frac{3}{4}$  mile in  $\frac{1}{2}$  hour. Which of the following represents the unit rate that Tamara walked?

A  $\frac{1}{2}$  mi/h                          C  $\frac{3}{4}$  mi/h  
 B  $\frac{2}{3}$  mi/h                          D  $1\frac{1}{2}$  mi/h

9. Simplify  $\frac{1}{2}(2a + b) - (4a + b)$ .

A  $-3a - \frac{1}{2}b$                       C  $-3a + \frac{3}{2}b$   
 B  $-2a + 2b$                       D  $-3a - b$

10. Jay spent \$6.40 to buy 4 muffins. How much will 9 muffins cost?

A \$12.03                          C \$14.40  
 B \$12.80                          D \$144.00

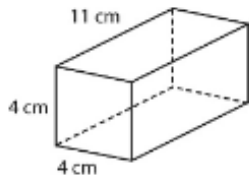
11. A reduced scale drawing of a rectangle measures 12 inches by 16 inches. The scale factor is  $\frac{1}{4}$ . What is the size of the original rectangle?

A 3 in.  $\times$  4 in.                      C 36 in.  $\times$  48 in.  
 B 16 in.  $\times$  20 in.                    D 48 in.  $\times$  64 in.

12. Which fraction is equivalent to  $-0.12$ ?

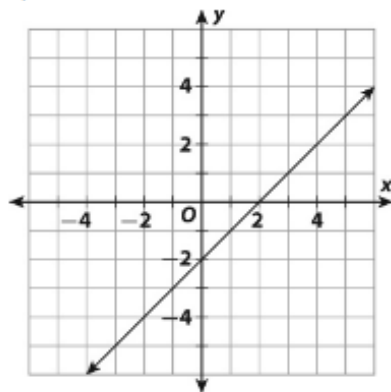
A  $-\frac{3}{25}$                                 C  $-\frac{4}{25}$   
 B  $-\frac{7}{50}$                                 D  $-\frac{6}{25}$

13. The cost of 2 pounds of coffee is \$17.95. To the nearest dollar, what is the cost of 5 pounds of coffee?
- A \$34                      C \$45  
B \$36                      D \$90
14. On a map, the distance between two cities is 5.25 inches. The map scale is 1 in.:25 mi. To the nearest mile, what is the actual distance between the two cities?
- A 13 mi                    C 125 mi  
B 30 mi                    D 131 mi
15. Patti got a new part-time job. Her hourly wage increased from \$10.50 to \$12.39. What was the percent increase in Patti's hourly wage?
- A 1.8%                    C 18%  
B 15.25%                D 189%
16. To the nearest cubic centimeter, what is the volume of the prism below?

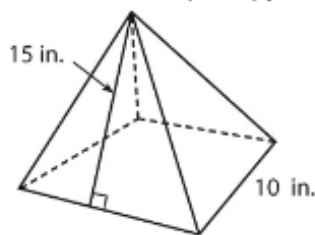


- A  $19 \text{ cm}^3$                 C  $88 \text{ cm}^3$   
B  $44 \text{ cm}^3$                 D  $176 \text{ cm}^3$
17. A bag contains 12 blue marbles, 5 red marbles, and 3 green marbles. Jonas selects a marble and then returns it to the bag before selecting a marble again. If Jonas selects a blue marble 4 out of 20 times, what is the experimental probability that the next marble he selects will be blue?
- A .02%                    C 20%  
B 2%                        D 200%
18. The circumference of a circle is  $36\pi$  inches. What is the radius of this circle?
- A 9 in.                     C 18 in.  
B 12 in.                    D 36 in.

19. Which equation is represented by the graph below?



- A  $y + 2 = x$   
B  $y + 1 = x$   
C  $y - 1 = x$   
D  $y - 2 = x$
20. To the nearest square inch, what is the surface area of the square pyramid below?



- A  $175 \text{ in}^2$                 C  $400 \text{ in}^2$   
B  $200 \text{ in}^2$                 D  $700 \text{ in}^2$
21. Cybil flips a coin and rolls a fair number cube at the same time. What is the probability that she will toss tails and roll a number less than 3?
- A  $\frac{1}{6}$                         C  $\frac{2}{5}$   
B  $\frac{1}{3}$                         D  $\frac{1}{2}$
22. The Rogers family drove 220 miles in 5.5 hours. How many miles would they drive at this same rate in 4 hours?
- A 88 mi                    C 160 mi  
B 147 mi                    D 176 mi