



21. For all positive integers x , y , and z , which of the following expressions is equivalent to $\frac{x}{y}$?

DO YOUR FIGURING HERE.

- A. $\frac{x \cdot z}{y \cdot z}$
 B. $\frac{x \cdot x}{y \cdot y}$
 C. $\frac{y \cdot x}{x \cdot y}$
 D. $\frac{x - z}{y - z}$
 E. $\frac{x + z}{y + z}$

22. What is the slope-intercept form of $8x - y - 6 = 0$?

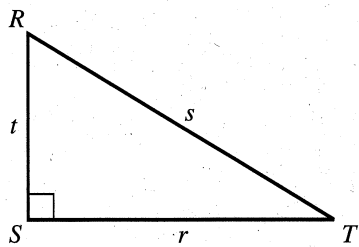
- F. $y = -8x - 6$
 G. $y = -8x + 6$
 H. $y = 8x - 6$
 J. $y = 8x + 6$
 K. $y = 6x - 8$

23. Which of the following is a solution to the equation $x^2 - 36x = 0$?

- A. 72
 B. 36
 C. 18
 D. 6
 E. -6

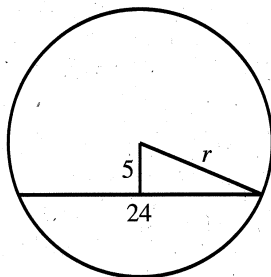
24. For right triangle $\triangle RST$ shown below, what is $\tan R$?

- F. $\frac{r}{s}$
 G. $\frac{r}{t}$
 H. $\frac{t}{r}$
 J. $\frac{t}{s}$
 K. $\frac{s}{t}$



25. A chord 24 inches long is 5 inches from the center of a circle, as shown below. What is the radius of the circle, to the nearest tenth of an inch?

- A. 29.0
 B. 24.5
 C. 16.9
 D. 13.0
 E. 10.9



GO ON TO THE NEXT PAGE.

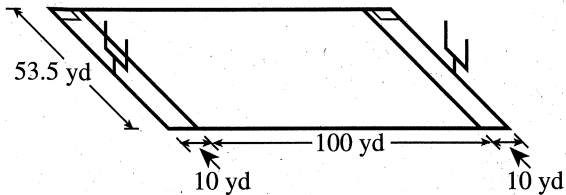


26. The length L , in meters, of a spring is given by the equation $L = \frac{2}{3}F + 0.03$, where F is the applied force in newtons. What force, in newtons, must be applied for the spring's length to be 0.18 meters?

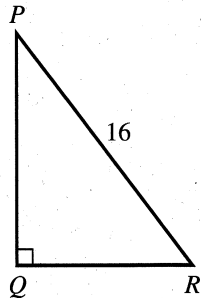
DO YOUR FIGURING HERE.

- F. 0.13
G. 0.15
H. 0.225
J. 0.255
K. 0.27

27. After a snowstorm, city workers removed an estimated 10,000 cubic yards of snow from the downtown area. If this snow were spread in an even layer over the entire rectangular football field shown below, about how many yards deep would the layer of snow be?



- A. Less than 1
B. Between 1 and 2
C. Between 2 and 3
D. Between 3 and 4
E. More than 4
28. The hypotenuse of the right triangle $\triangle PQR$ shown below is 16 feet long. The sine of $\angle P$ is $\frac{3}{5}$. About how many feet long is \overline{QR} ?



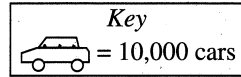
- F. 8.0
G. 9.6
H. 12.4
J. 14.3
K. 15.4

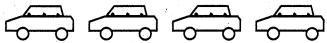

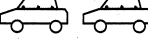

GO ON TO THE NEXT PAGE.



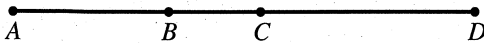
29. The graph below shows the number of cars assembled last year in 4 cities, to the nearest 5,000 cars. According to the graph, what fraction of the cars assembled in all 4 cities were assembled in Coupeville?

DO YOUR FIGURING HERE.



City	Cars assembled
Car Town	
Coupeville	
Truck City	
Sedan Falls	

- A. $\frac{1}{5}$
 B. $\frac{1}{4}$
 C. $\frac{3}{11}$
 D. $\frac{3}{10}$
 E. $\frac{1}{3}$
30. Points B and C lie on \overline{AD} as shown below. The length of \overline{AD} is 30 units; \overline{AC} is 16 units long; and \overline{BD} is 20 units long. How many units long, if it can be determined, is \overline{BC} ?



- F. 4
 G. 6
 H. 10
 J. 14
 K. Cannot be determined from the given information
31. What is the x -coordinate of the point in the standard (x,y) coordinate plane at which the 2 lines $y = 2x + 6$ and $y = 3x + 4$ intersect?
- A. 1
 B. 2
 C. 4
 D. 6
 E. 10

GO ON TO THE NEXT PAGE.