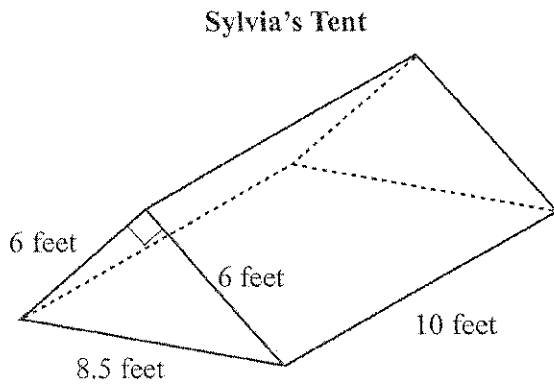


Problem Set #10

Name: _____

Date: _____

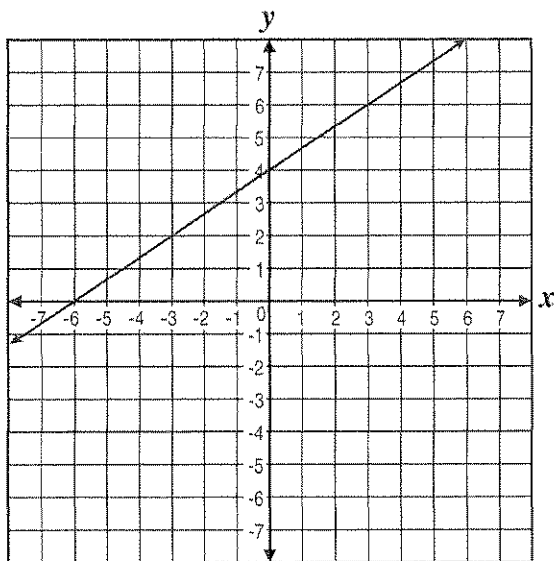
1. The triangular prism below represents the shape of Sylvia's tent.



What is the volume of the tent in cubic feet?

A. 180 B. 241 C. 255 D. 360

2. Which equation represents the line shown in the graph below?



A. $y = \frac{2}{3}x + 4$ B. $y = \frac{2}{3}x - 6$
 C. $y = \frac{3}{2}x + 4$ D. $y = \frac{3}{2}x - 6$

3. Tim plotted the points (2, 4) and (6, 10).

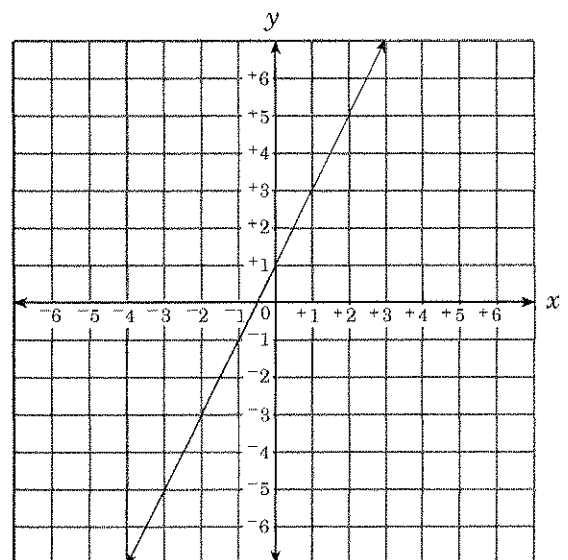
What is the equation of a line that passes through both of Tim's parents?

A. $y = \frac{2}{3}x + 1$ B. $y = \frac{2}{3}x + 6$
 C. $y = \frac{3}{2}x + 1$ D. $y = \frac{3}{2}x + 2$

4. Which set contains only ordered pairs that satisfy $y = 2x + 3$?

A. $\{(0, 2), (1, 3), (2, 4)\}$
 B. $\{(0, 2), (1, 5), (2, 8)\}$
 C. $\{(0, 3), (1, 4), (2, 5)\}$
 D. $\{(0, 3), (1, 5), (2, 7)\}$

5. Which equation describes the line graphed below?



A. $x - y = 0$ B. $x - y = -1$
 C. $2x - y = -1$ D. $x + 2y = -3$

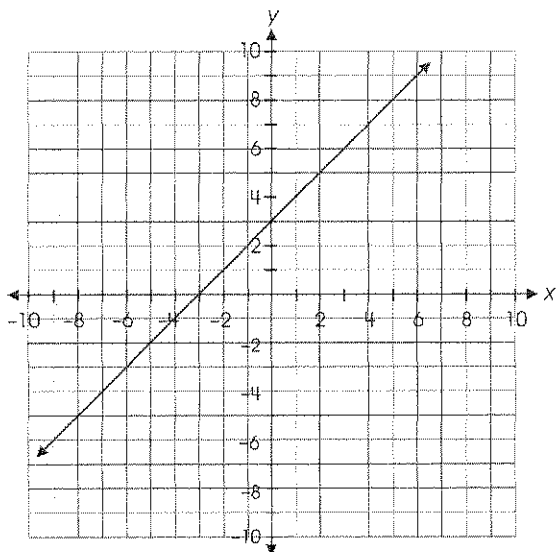
6. A line has a slope of $\frac{2}{3}$ and a y-intercept of -4 . Which of the following is an equation of the line?

A. $2x - 3y = 12$ B. $2x - 3y = -4$
 C. $3x - 2y = -4$ D. $3x - 2y = 12$

7. What is the equation of the line that contains the point $(\frac{1}{2}, -3)$ and has a slope of -3 ?

A. $y = -3x - \frac{3}{2}$ B. $y = -3x - \frac{17}{2}$
 C. $y = -3x + \frac{3}{2}$ D. $y = -3x + \frac{17}{2}$

8. The graph represents the equation $y = x + 3$.



How would the graph change if the constant were changed from 3 to 5?

- A. The line will shift up 2 units.
 B. The line will shift down 2 units.
 C. The line will be steeper.
 D. The line will change direction.

9. Cindy needs to graph the following equation: $y = 2x + 5$. Which table below will help her correctly graph the equation?

A.

x	y
-2	1
-1	3
0	5
1	7
2	9
3	11
4	13

B.

x	y
-2	-9
-1	-7
0	-5
1	-3
2	-1
3	1
4	3

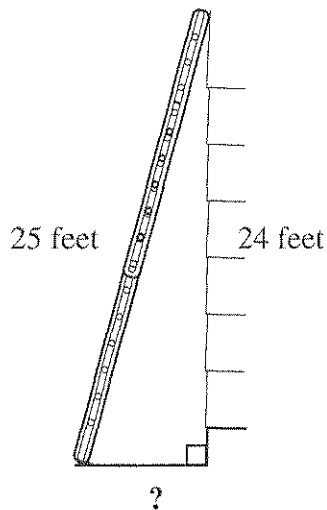
C.

x	y
-2	-1
-1	-3
0	-5
1	-7
2	-9
3	-11
4	-13

D.

x	y
-2	9
-1	7
0	5
1	3
2	1
3	-1
4	-3

10. The diagram below shows the placement of a ladder against Cheri's house.



The ladder needs to lean against the house at a height of 24 feet. How far should Cheri place the base of the ladder from her house?

- A. 1 foot B. 7 feet
C. 35 feet D. 49 feet
11. If $a = 2$ and $b = 3$, which of the following is equivalent to a^3b^3 ?
- A. 5^3 B. 5^6 C. 6^3 D. 6^6
12. For what value of x will $3x + 4 = x - 6$ be a true statement?
- A. $x = -5$ B. $x = -\frac{5}{2}$
C. $x = -1$ D. $x = -\frac{1}{2}$

13. The table below shows the value of a car during its first 3 years.

VALUE OF CAR

Year	Value
0	\$21,000
1	\$18,500
2	\$16,000
3	\$13,500

The pattern continues. What will be the value of the car in year 6?

- A. \$1,000 B. \$3,500
C. \$6,000 D. \$8,500
14. Keith uses this formula to calculate the monthly profit of his bicycle store.

$$P = 400n - 7,200$$

In the formula, P is the monthly profit and n is the number of bicycles sold in a month. How many bicycles must he sell to make a profit of exactly \$2,000 in a month?

- A. 13 bicycles B. 17 bicycles
C. 23 bicycles D. 25 bicycles
15. Which equation has a graph parallel to the graph of $y = -\frac{2}{3}x + 2$?
- A. $y = \frac{3}{2}x + 2$ B. $y = -\frac{2}{3}x + 4$
C. $y = \frac{2}{3}x + 4$ D. $y = \frac{3}{2}x + 2$