

SAT Linear Equations in Two Variables Worksheet

Name: _____ Date: _____

Circle one answer for each question. Use the blank space for calculations. A calculator is allowed.

1. What is the y -intercept of the graph of $4x + 5y = 40$ in the xy -plane?

- A. (0, 4)
- B. (0, 5)
- C. (0, 8)
- D. (0, 10)

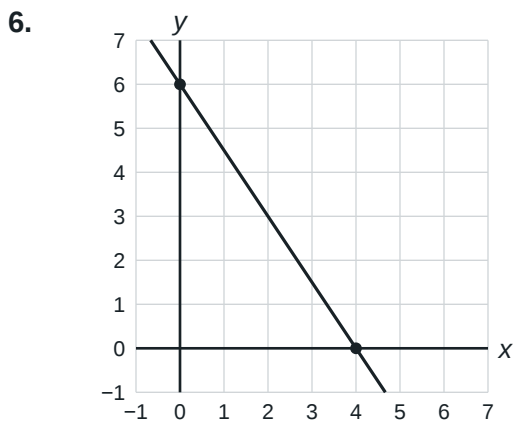
2. Which point lies on the graph of $2x - 3y = 12$ in the xy -plane?

- A. (0, 4)
- B. (3, 2)
- C. (4, 6)
- D. (6, 0)

3. A store sells notebooks for \$3 each and folders for \$2 each. Maya spends exactly \$24 on n notebooks and f folders. Which equation represents this situation?

- A. $2n + 3f = 24$
- B. $n + f = 24$
- C. $5(n + f) = 24$
- D. $3n + 2f = 24$

4. Jaya earned \$600 last month from t hours of tutoring at \$15 per hour and b hours at a bookstore at \$10 per hour, so $15t + 10b = 600$. If she tutored for 20 hours, how many hours did she work at the bookstore?
- A. 20
B. 30
C. 40
D. 60
5. What is the slope of the graph of $6x + 2y = 7$ in the xy -plane?
- A. -3
B. $-\frac{1}{3}$
C. 3
D. 6



Which equation represents the line shown in the xy -plane?

- A. $3x + 2y = 12$
B. $2x + 3y = 12$
C. $2x + 3y = 18$
D. $3x - 2y = 12$

7. A theater models its ticket sales for one show with $20x + 50y = 1,000$, where x is the number of \$20 tickets sold and y is the number of \$50 tickets sold. What is the best interpretation of the x -intercept of the graph of this equation in the xy -plane?
- A. The theater's total ticket sales were \$50.
 - B. If no \$20 tickets were sold, 20 of the \$50 tickets were sold.
 - C. If no \$50 tickets were sold, 50 of the \$20 tickets were sold.
 - D. The theater could sell at most 50 of the \$50 tickets.
8. In the xy -plane, the graph of $cx + 3y = 12$ passes through the point $(2, 6)$, where c is a constant. What is the value of c ?
- A. -3
 - B. 1
 - C. 3
 - D. 15

9.

x	y
0	7
2	3
5	-3

The table shows three points on a line in the xy -plane. Which equation represents the line?

- A. $x + 2y = 7$
- B. $2x - y = 7$
- C. $-2x + y = 7$
- D. $2x + y = 7$

10. Line k is perpendicular to the graph of $2x - 5y = 10$ in the xy -plane and passes through $(0, 4)$. Which equation represents line k ?
- A. $y = 0.4x + 4$
 - B. $y = -2.5x + 4$
 - C. $y = 2.5x + 4$
 - D. $y = -0.4x + 4$
11. In the xy -plane, the graph of $3x + ky = 24$, where k is a positive constant, has x -intercept $(r, 0)$ and y -intercept $(0, s)$. If $r = 2s$, what is the value of k ?
- A. 1.5
 - B. 3
 - C. 6
 - D. 12
12. A line in the xy -plane has x -intercept $(c, 0)$ and y -intercept $(0, d)$, where c and d are positive. What is the slope of the line?
- A. $-\frac{c}{d}$
 - B. $-\frac{d}{c}$
 - C. $\frac{c}{d}$
 - D. $\frac{d}{c}$