

Algebra 1

Systems of Equations Review/Parallel Lines

Solve each system by **elimination**.

1.
$$\begin{aligned} -3x + 3y &= 18 \\ 5x - 3y &= -26 \end{aligned}$$

2.
$$\begin{aligned} x - 9y &= -27 \\ -2x + 3y &= 24 \end{aligned}$$

3.
$$\begin{aligned} 4x - 6y &= -18 \\ x - 3y &= 0 \end{aligned}$$

4.
$$\begin{aligned} -x + 6y &= -12 \\ 4x - 2y &= -18 \end{aligned}$$

5.
$$\begin{aligned} -4x + 2y &= 18 \\ -8x + y &= 15 \end{aligned}$$

6.
$$\begin{aligned} -5x - 8y &= -2 \\ -x + y &= -3 \end{aligned}$$

Solve each system by **substitution**.

7.
$$\begin{aligned} 6x - y &= 6 \\ 3x + 4y &= 3 \end{aligned}$$

8.
$$\begin{aligned} 2x - 2y &= 8 \\ -2x + y &= -10 \end{aligned}$$

9.
$$\begin{aligned} 9x - 6y &= -27 \\ -10x - 5y &= 30 \end{aligned}$$

Solve each system by **graphing**.

10.
$$\begin{aligned} y &= \frac{1}{2}x + 6 \\ y &= \frac{11}{2}x - 4 \end{aligned}$$

11.
$$\begin{aligned} -2y &= x + 14 \\ -3x - 2y &= 18 \end{aligned}$$

12. Write an equation parallel to $y = 5 - \frac{2}{3}x$ through the point $(0, 8)$.

13. Write an equation perpendicular to $y = 5 - \frac{2}{3}x$ through the point $(0, -10)$.

14. Write an equation parallel to $y = -7 + 2x$ through the point $(3, 12)$.

15. Write an equation perpendicular to $y = -7 + 5x$ through the point $(15, 4)$.

16. Find the equation of the line through $(-5, -1)$ and $(-15, -7)$.

ANSWERS:

1. $(-4, 2)$

2. $(-9, 2)$

3. $(-9, -3)$

4. $(-6, -3)$

5. $(-1, 7)$

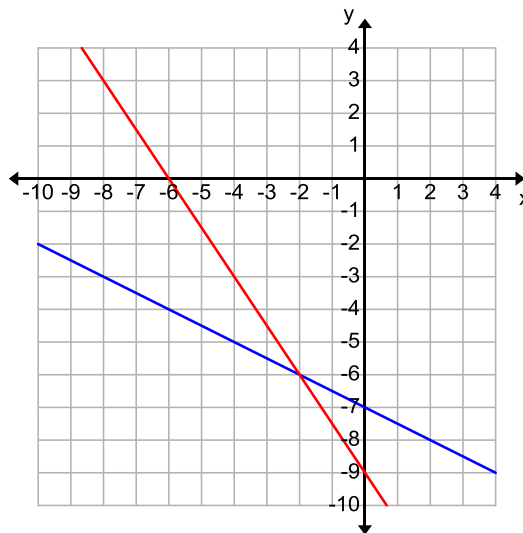
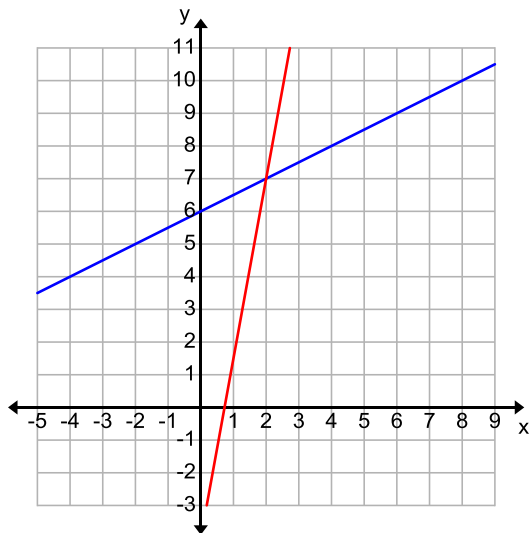
6. $(2, -1)$

7. $(1, 0)$

8. $(6, 2)$

9. $(-3, 0)$

DID YOU REMEMBER TO LABEL EACH LINE WITH THE EQUATION AND GIVE THE SOLUTION?



10.
 $(2, 7)$

11.
 $(-2, -6)$

12. $y = 8 - \frac{2}{3}x$

13. $y = -10 + \frac{3}{2}x$

14. $y = 12 + 2(x - 3)$

15. $y = 4 - \frac{1}{5}(x - 15)$

16. $y = -1 + \frac{3}{5}(x + 5)$