

Determine if the given lines intersect. If the lines do not intersect then explain why. If the lines intersect then determine the point of intersection.

1.
$$\begin{aligned} 5x + y &= 8 \\ 3x - 4y &= 14 \end{aligned}$$

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

3.
$$\begin{aligned} 4x + 13y &= 5 \\ -6x + y &= 13 \end{aligned}$$

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

5.
$$\begin{aligned} 9x + 5y &= 6 \\ 2x - 5y &= -17 \end{aligned}$$

6.
$$\begin{aligned} 5x + 3y &= 19 \\ 2x - 5y &= 11 \end{aligned}$$

7.
$$\begin{aligned} 3x + 2y &= 3 \\ 9x - 8y &= -2 \end{aligned}$$

8.
$$\begin{aligned} 5x - 9y &= 7 \\ 7y - 3x &= -5 \end{aligned}$$

9.
$$\begin{aligned} 3x - 5y &= -2 \\ 5y - 3x &= 7 \end{aligned}$$

10.
$$\begin{aligned} 2x + 3y &= 1 \\ 4x + 6y &= 2 \end{aligned}$$

11.
$$\begin{aligned} \frac{2}{5}x + \frac{1}{2}y &= 2 \\ \frac{1}{2}x - \frac{1}{6}y &= 3 \end{aligned}$$

12.
$$\begin{aligned} 5x + 3y &= 17 \\ 6x - 18y &= -12 \end{aligned}$$

13.
$$\begin{aligned} \frac{1}{3}x + \frac{1}{5}y &= 7 \\ \frac{1}{6}x - \frac{2}{5}y &= -4 \end{aligned}$$

14.
$$\begin{aligned} 3x - 2y &= 1 \\ -6x + 4y &= -2 \end{aligned}$$

15.
$$\begin{aligned} 5x - 9y &= 7 \\ 15x - 27y &= 21 \end{aligned}$$

16.
$$\begin{aligned} \frac{x+y}{2} - \frac{x-y}{2} &= 1 \\ \frac{x-y}{2} + \frac{x+y}{6} &= -2 \end{aligned}$$

17.
$$\begin{aligned} 3x + 2y &= 14 \\ x - 2y &= 10 \end{aligned}$$

18.
$$\begin{aligned} x + y &= 4 \\ x + 7y &= 11 \end{aligned}$$

19.
$$\begin{aligned} 2x - y + 2 &= 0 \\ 4x + y - 5 &= 0 \end{aligned}$$

20.
$$\begin{aligned} \frac{1}{5}x + \frac{1}{2}y &= 8 \\ x + y &= 20 \end{aligned}$$

21.
$$\begin{aligned} 2x - 4y &= -2 + x - y \\ 4x + 5y &= 17 - x + 2y \end{aligned}$$

22.
$$\begin{aligned} 3x + 4y - 5 &= y - 5 \\ 10x - 4y - 5 &= 5 - 2y + 7x \end{aligned}$$

23.
$$\begin{aligned} 2(3x + 2y - 2) - 4 &= 16 - (x + y) - 3y \\ 2(x - 4y) - 3y &= 8 - (3y - x) \end{aligned}$$