



Systems of linear equations

Use substitution to find both coordinates of the solution to each system of linear equations.

1) $4x - y = 21$
 $y = 7x$

2) $6x - y = -7$
 $y = 7x$

3) $2x - y = -14$
 $y = 6$

4) $y = 6$
 $3x + 2y = -6$

5) $y = -5$
 $7x + 4y = -6$

6) $2x - 3y = 0$
 $y = -3x$

$$\begin{aligned} 7) \quad 3x - 3y &= 3 \\ y &= -1 \end{aligned}$$

$$\begin{aligned} 8) \quad -3x + 5y &= -7 \\ y &= 2x \end{aligned}$$

$$\begin{aligned} 9) \quad y &= -6x \\ 3x - 3y &= -21 \end{aligned}$$

$$\begin{aligned} 10) \quad y &= 8x \\ 5x - 4y &= 0 \end{aligned}$$

$$\begin{aligned} 11) \quad y &= 2 \\ -4x - 5y &= -10 \end{aligned}$$

$$\begin{aligned} 12) \quad -8x + 6y &= -18 \\ y &= -3 \end{aligned}$$

$$13) \begin{aligned} y &= 6 \\ -8x + 2y &= 12 \end{aligned}$$

$$14) \begin{aligned} y &= -1 \\ -6x - 2y &= 2 \end{aligned}$$

$$15) \begin{aligned} y &= 2 \\ 3x - 2y &= -16 \end{aligned}$$

$$16) \begin{aligned} y &= 0 \\ -x - 6y &= -3 \end{aligned}$$

$$17) \begin{aligned} -2x + 7y &= 3 \\ y &= 1 \end{aligned}$$

$$18) \begin{aligned} 2x + 3y &= 24 \\ y &= 6 \end{aligned}$$

$$19) \begin{aligned} y &= 4 \\ 6x - 2y &= 4 \end{aligned}$$

$$20) \begin{aligned} y &= -4 \\ 2x + 3y &= -22 \end{aligned}$$

$$21) \begin{aligned} 4x - 3y &= 10 \\ y &= -2 \end{aligned}$$

$$22) \begin{aligned} -5x - 6y &= -11 \\ y &= -4 \end{aligned}$$

$$23) \begin{aligned} -3x - 2y &= -1 \\ y &= -2x \end{aligned}$$

$$24) \begin{aligned} -4x - 8y &= -16 \\ y &= 0 \end{aligned}$$

$$\begin{aligned} 25) \quad & y = -2 \\ & 7x - 3y = -1 \end{aligned}$$

$$\begin{aligned} 26) \quad & y = -8 \\ & -5x + 5y = -5 \end{aligned}$$

$$\begin{aligned} 27) \quad & y = -2 \\ & 4x - 4y = 8 \end{aligned}$$

$$\begin{aligned} 28) \quad & y = -7 \\ & 5x - 3y = 1 \end{aligned}$$

$$\begin{aligned} 29) \quad & -3x - y = 15 \\ & y = -6 \end{aligned}$$

$$\begin{aligned} 30) \quad & y = 2 \\ & 4x - 3y = -14 \end{aligned}$$

Answers to Systems of linear equations

1) $(-7, -49)$

5) $(2, -5)$

9) $(-1, 6)$

13) $(0, 6)$

17) $(2, 1)$

21) $(1, -2)$

25) $(-1, -2)$

29) $(-3, -6)$

2) $(7, 49)$

6) $(0, 0)$

10) $(0, 0)$

14) $(0, -1)$

18) $(3, 6)$

22) $(7, -4)$

26) $(-7, -8)$

30) $(-2, 2)$

3) $(-4, 6)$

7) $(0, -1)$

11) $(0, 2)$

15) $(-4, 2)$

19) $(2, 4)$

23) $(-1, 2)$

27) $(0, -2)$

4) $(-6, 6)$

8) $(-1, -2)$

12) $(0, -3)$

16) $(3, 0)$

20) $(-5, -4)$

24) $(4, 0)$

28) $(-4, -7)$