

B SOLVING LINEAR SYSTEMS Solve the linear system using any algebraic method.

21. $3x + 2y = 4$ $(2, -1)$
 $2y = 8 - 5x$

24. $0.3x + 0.1y = -0.1$ $(-1, 2)$
 $-x + y = 3$

27. $0.2x - 1.5y = -1$ $(10, 2)$
 $x - 4.5y = 1$

30. $x + y = 0$ $(2, -2)$

$$\frac{1}{2}x - \frac{1}{2}y = 2$$

22. $4x - 5y = 18$ $(3\frac{4}{11}, -\frac{10}{11})$
 $3x = y + 11$

25. $4.4x - 3.6y = 7.6$ $(5, 4)$
 $x - y = 1$

28. $1.5x - 3.5y = -5$ $(20, 10)$
 $-1.2x + 2.5y = 1$

31. $3x + y = \frac{1}{3}$ $(\frac{1}{3}, -\frac{2}{3})$

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

23. $8x - 9y = -15$ $(-4\frac{5}{22}, -2\frac{1}{11})$
 $-4x = 19 + y$

26. $3x - 2y = -20$ $(-2, 7)$
 $x + 1.2y = 6.4$

29. $4.9x + 2.4y = 7.4$ $(2, -1)$
 $0.7x + 3.6y = -2.2$

32. $\frac{3}{5}x - \frac{3}{4}y = -3$ $(10, 12)$

$$\frac{2}{5}x + \frac{1}{3}y = 8$$

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$$\frac{3}{5}x - \frac{3}{4}y = -3 \quad (10, 12)$$

$$\frac{2}{5}x + \frac{1}{3}y = 8$$

$$\xrightarrow{\cdot 20} 12x - 15y = -60$$

$$\xrightarrow{\cdot 15} 6x + 5y = 90$$

$$\xrightarrow{\cdot -2}$$

$$-12x - 10y = -180$$

$$\pm$$

$$-25y = -240$$

$$y = \frac{240}{25}$$

$$y = \frac{48}{5}$$

$$\begin{array}{l}
 27. \quad 0.2x - 1.5y = -1 \xrightarrow{\cdot 10} 2x - 15y = -10 \xrightarrow{\cdot -5} -10x + 75y = 50 \\
 \quad \quad x - 4.5y = 1 \xrightarrow{\cdot 10} 10x - 45y = 10 \xrightarrow{\quad} \underline{10x - 45y = 10}
 \end{array}$$

$$30y = 60$$

$$y = 2$$

$$10x - 45(2) = 10$$

$$10x - 90 = 10$$

$$10x = 100$$

$$x = 10$$

$$24. \begin{aligned} 0.3x + 0.1y &= -0.1 && \xrightarrow{\cdot 10} \\ -x + y &= 3 && \xrightarrow{\hspace{1cm}} \end{aligned}$$

$$\begin{aligned} 3x + y &= -1 \\ -x + y &= 3 \end{aligned}$$

$$\begin{array}{r} \xrightarrow{\cdot -1} \quad -3x + -1y = -1 \\ \xrightarrow{\hspace{1cm}} \quad -x + y = 3 \\ \hline + \\ \hline -4x = 4 \end{array}$$

$$-(-1) + y = 3$$

$$1 + y = 3$$

$$y = 2$$

$$x = -1$$