

Name: Guide

Date: _____

Solve the systems using substitution:

$$1. \begin{cases} y = x + 4 \\ 2x + y = 19 \end{cases}$$

$$\begin{aligned} 2x + (x + 4) &= 19 & y &= 5 + 4 \\ 3x + 4 &= 19 & y &= 9 \\ 3x &= 15 & & \\ x &= 5 & & \end{aligned}$$

$(5, 9)$

$$2. \begin{cases} x = -2y + 1 \\ 5x + 3y = -23 \end{cases}$$

$$3. \begin{cases} y = 2x + 3 \\ 2x + 3y = 5 \end{cases}$$

$$\begin{aligned} 2x + 3(2x + 3) &= 5 & y &= 2(-\frac{1}{2}) + 3 \\ 2x + 6x + 9 &= 5 & y &= -1 + 3 \\ 8x + 9 &= 5 & y &= 2 \\ 8x &= -4 & & \\ x &= -\frac{1}{2} & & \end{aligned}$$

$(-\frac{1}{2}, 2)$

$$4. \begin{cases} y = -3x + 3 \\ 7x + 2y = 1 \end{cases}$$

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

$$\begin{aligned} 2(\frac{1}{2}y + 1) + 2y &= 8 & \frac{1}{2}(2) + 1 &= x \\ y + 2 + 2y &= 8 & 1 + 1 &= x \\ 3y + 2 &= 8 & 2 &= x \\ 3y &= 6 & & \\ y &= 2 & & \end{aligned}$$

$(2, 2)$

$$6. \begin{cases} x + y = 3 \\ y = x + 1 \end{cases}$$

Review: Solve by Graphing

$$7. \begin{cases} 3x + 2y = 4 \\ y + 2 = \frac{1}{2}x \end{cases}$$

Take a look
at your
2.4 graphing
notes

