

## Sec. 7.2 The Substitution Method

Solve by substitution.

a.  $10x + 2y = 10$

$$y = -10$$

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

$$10x - 20 = 10$$

$$+20 \quad +20$$

$$\frac{10x}{10} = \frac{30}{10}$$

$$-10 = -10$$

$$\begin{matrix} x, y \\ (3, -10) \end{matrix}$$

Check

$$10 \cdot 3 + 2(-10) = 10$$

$$30 - 20$$

$$10 = 10$$

$$x = 3$$

b.  $2x + 5y = 14$

$$y = 5$$

$$\left(-\frac{11}{2}, 5\right)$$

$$2x + 5 \cdot 5 = 14$$

$$2x + 25 = 14$$

$$-25 \quad -25$$

$$\frac{2x}{2} = \frac{-11}{2}$$

$$x = -\frac{11}{2}$$

p. 329

$$(4, 10)$$

p. 323 (15, 16)