# Module 7 Lesson 3

## Are You Ready? Possible Solutions

1. a. $x + y = 9$
$y = -x + 9$

b. $5x + 4y = 20$
$4y = -5x + 20$
$y = -\frac{5}{4}x + 5$

c. $3x - 2y = -14$
$-2y = -3x - 14$
$y = \frac{3}{2}x + 7$

2. a. $x + \frac{1}{4} = \frac{3}{4}$ ← Multiply through by 4.
$4x + 1 = 3$

b. $\frac{2}{3}x + \frac{1}{2} = 9$ ← Multiply through by 6.
$4x + 3 = 54$

3. a. $3x + 4 = 2x - 2$
$3x + 4 - 2x = 2x - 2 - 2x$
$x + 4 = -2$
$x + 4 - 4 = -2 - 4$
$x = -6$

b. $5 - 2(x - 1) = 8$ ← Subtract 5 from both sides.
$-2(x - 1) = 3$ ← Divide both sides by $-2$.
$x - 1 = -\frac{3}{2}$ ← Add 1 to each side.
$x = -\frac{1}{2}$

4. a. $2(x - 2) = 2x - 4$

b. $-3(4y + 1) = -12y - 3$

c. $(2x + 1)(x + 3) = 2x(x + 3) + 1(x + 3)$
$= 2x^2 + 6x + 1x + 3$
$= 2x^2 + 7x + 3$