

## Multi-Step Equations

Solve each equation and check your answers.

1)  $8(x+8) = 88$

$$8x + 64 = 88$$
$$\underline{-64} \quad \underline{-64}$$

$$\frac{8x}{8} = \frac{24}{8}$$

$$x = 3$$

2)  $3(8p+3) = 201$

$$24p + 9 = 201$$
$$\underline{-9} \quad \underline{-9}$$

$$\frac{24p}{24} = \frac{192}{24}$$

$$p = 8$$

3)  $-2(5x+7) = -94$

$$-10x - 14 = -94$$
$$\underline{+14} \quad \underline{+14}$$

$$\frac{-10x}{-10} = \frac{-80}{-10}$$

$$x = 8$$

4)  $-7(n+6) = -91$

$$-7n - 42 = -91$$
$$\underline{+42} \quad \underline{+42}$$

$$\frac{-7n}{-7} = \frac{-49}{-7}$$

$$n = 7$$

5)  $4(6a+5) = 116$

$$24a + 20 = 116$$
$$\underline{-20} \quad \underline{-20}$$

$$\frac{24a}{24} = \frac{96}{24}$$

$$a = 4$$

6)  $7(8x-7) = 399$

$$56x - 49 = 399$$
$$\underline{+49} \quad \underline{+49}$$

$$\frac{56x}{56} = \frac{448}{56}$$

$$x = 8$$

7)  $-5(1+x) + 8(2+6x) = 11$

$$\underline{-5} - \underline{5x} + \underline{16} + \underline{48x} = 11$$

$$\underline{11} + \underline{43x} = 11$$
$$\underline{-11} \quad \underline{-11}$$

$$\frac{43x}{43} = \frac{0}{43}$$

$$x = 0$$

8)  $8(a+8) + 3(a-4) = 74$

$$\underline{8a} + \underline{64} + \underline{3a} - \underline{12} = 74$$

$$\underline{11a} + \underline{52} = 74$$
$$\underline{-52} \quad \underline{-52}$$

$$\frac{11a}{11} = \frac{22}{11}$$

$$a = 2$$

9)  $-4(-2-2b) - 6(b-7) = 44$

$$\underline{8} + \underline{8b} - \underline{6b} + \underline{42} = 44$$

$$\underline{50} + \underline{2b} = 44$$
$$\underline{-50} \quad \underline{-50}$$

$$\frac{2b}{2} = \frac{-6}{2}$$

$$b = -3$$

10)  $6(1+3x) - 7(-6x+4) = 38$

$$\underline{6} + \underline{18x} + \underline{42x} - \underline{28} = 38$$

$$\underline{-22} + \underline{60x} = 38$$
$$\underline{+22} \quad \underline{+22}$$

$$\frac{60x}{60} = \frac{60}{60}$$

$$x = 1$$