

Two-Step Equations

Solve each equation.

1) $\frac{2+p}{2} = 7$

$$2 \cdot \frac{2+p}{2} = 7 \cdot 2$$

$$2+p = 14$$

$$2+p-2 = 14-2$$

$$p = 12$$

3) $-2b+8 = -12$

$$-2b+8 = -12$$

$$-2b+8-8 = -12-8$$

$$-2b = -20$$

$$\frac{-2b}{-2} = \frac{-20}{-2}$$

$$b = 10$$

5) $-1+4n = 59$

$$-1+4n = 59$$

$$-1+4n+1 = 59+1$$

$$4n = 60$$

$$\frac{4n}{4} = \frac{60}{4}$$

$$n = 15$$

7) $\frac{x}{4} + 3 = -2$

$$\frac{x}{4} + 3 = -2$$

$$\frac{x}{4} + 3 - 3 = -2 - 3$$

$$\frac{x}{4} = -5$$

$$4 \cdot \frac{x}{4} = -5 \cdot 4$$

$$x = -20$$

9) $\frac{9+p}{8} = 2$

$$9+p = 2 \cdot 8$$

$$9+p = 16$$

$$9+p-9 = 16-9$$

$$p = 7$$

11) $\frac{r}{10} + 3 = 4$

$$\frac{r}{10} + 3 = 4$$

$$\frac{r}{10} + 3 - 3 = 4 - 3$$

$$\frac{r}{10} = 1$$

$$10 \cdot \frac{r}{10} = 1 \cdot 10$$

$$r = 10$$

2) $-8x+4 = -44$

$$-8x+4 = -44$$

$$-8x+4-4 = -44-4$$

$$-8x = -48$$

$$\frac{-8x}{-8} = \frac{-48}{-8}$$

$$x = 6$$

4) $\frac{k-3}{9} = -1$

$$k-3 = -1 \cdot 9$$

$$k-3 = -9$$

$$k-3+3 = -9+3$$

$$k = -6$$

6) $\frac{x+3}{7} = 2$

$$x+3 = 2 \cdot 7$$

$$x+3 = 14$$

$$x+3-3 = 14-3$$

$$x = 11$$

8) $\frac{x-6}{2} = -2$

$$x-6 = -2 \cdot 2$$

$$x-6 = -4$$

$$x-6+6 = -4+6$$

$$x = 2$$

10) $-2 + \frac{x}{3} = -4$

$$-2 + \frac{x}{3} = -4$$

$$-2 + \frac{x}{3} + 2 = -4 + 2$$

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

$$3 \cdot \frac{x}{3} = -2 \cdot 3$$

$$x = -6$$

12) $5 + \frac{p}{12} = 4$

$$5 + \frac{p}{12} = 4$$

$$5 + \frac{p}{12} - 5 = 4 - 5$$

$$\frac{p}{12} = -1$$

$$12 \cdot \frac{p}{12} = -1 \cdot 12$$

$$p = -12$$