

2-3 Solve Multi-Step Equations

Solve:

1. $3(n-5) = -21$

$$3n - 15 = -21$$

$$\begin{array}{r} +15 \\ +15 \end{array}$$

$$\frac{3n}{3} = \frac{-6}{3}$$

$$\boxed{n = -2}$$

2. $12 - \frac{w}{6} = 24$

$$\begin{array}{r} -12 \\ -12 \end{array}$$

$$-6 \cdot \left(-\frac{w}{6}\right) = 12(-6)$$

$$\boxed{w = -72}$$

3. $5x - 3 = 9x + 17$

$$\begin{array}{r} -5x \\ -5x \end{array}$$

$$-3 = 4x + 17$$

$$\begin{array}{r} -17 \\ -17 \end{array}$$

$$\frac{-20}{4} = \frac{4x}{4}$$

$$\boxed{-5 = x}$$

4. $\frac{3h-7}{4} = \frac{7}{2}$

$$2(3h-7) = 4(7)$$

$$6h - 14 = 28$$

$$\begin{array}{r} +14 \\ +14 \end{array}$$

$$\frac{6h}{6} = \frac{42}{6}$$

$$\boxed{h = 7}$$

5. $4(2w-1) - 2w = -22$

$$8w - 4 - 2w = -22$$

$$6w - 4 = -22$$

$$\begin{array}{r} +4 \\ +4 \end{array}$$

$$\frac{6w}{6} = \frac{-18}{6}$$

$$\boxed{w = -3}$$