

Notes 4-3

Int 1

Solving Two-Step Equations

Unit 4

Solve each equation. Check your solution.

1) $2x + 3 = 9$

$$\begin{array}{r|l} \cancel{2x} + \cancel{3} = 9 & \\ -3 & -3 \\ \hline \cancel{2x} = \frac{6}{2} & \\ \cancel{2} & \cancel{2} \\ \hline \boxed{x = 3} & \end{array}$$

CHECK: $2(3) + 3 = 9$
 $6 + 3 = 9$
 $9 = 9$
 ✓

2) $3y + 2 = 23$

$$\begin{array}{r|l} \cancel{3y} + 2 = 23 & \\ +2 & -2 \\ \hline \cancel{3y} = 21 & \\ \cancel{3} & \cancel{3} \\ \hline \boxed{y = 7} & \end{array}$$

CHECK: $3(7) + 2 = 23$
 $21 + 2 = 23$
 $23 = 23$
 ✓

3) $-2c + 4 = -10$

$$\begin{array}{r|l} \cancel{-2c} + 4 = -10 & \\ -4 & -4 \\ \hline \cancel{-2c} = -14 & \\ \cancel{-2} & \cancel{-2} \\ \hline \boxed{c = 7} & \end{array}$$

$-2(7) + 4 = -10$
 $-14 + 4 = -10$
 $-10 = -10$ ✓

4) $-2 - 4w = 10$

$$\begin{array}{r|l} -2 - \cancel{4w} = 10 & \\ +2 & +2 \\ \hline \cancel{-4w} = 12 & \\ \cancel{-4} & \cancel{-4} \\ \hline \boxed{w = -3} & \end{array}$$

CHECK:
 $-2 - 4(-3) = 10$
 $-2 + 12 = 10$
 $10 = 10$ ✓

Notes 4-3

Int 1

Solving Two-Step Equations

Unit 4

5) $1.92 + .25g = 4.8$

$$\begin{array}{r} \cancel{1.92} + .25g = 4.8 \\ -1.92 \quad -1.92 \\ \hline \end{array}$$

$$\begin{array}{r} .25g = 2.88 \\ \underline{.25} \quad \underline{.25} \end{array}$$

$$g = 11.52$$

6) $-3.5y - 5.5 = 9.2$

$$\begin{array}{r} \cancel{-3.5y} - 5.5 = 9.2 \\ +5.5 \quad +5.5 \\ \hline \end{array}$$

$$\begin{array}{r} -3.5y = 14.7 \\ \underline{-3.5} \quad \underline{-3.5} \end{array}$$

$$y = -4.2$$

7) $17 + \frac{5}{6}r = 2$

$$\begin{array}{r} \cancel{17} + \frac{5}{6}r = 2 \\ -17 \quad -17 \\ \hline \end{array}$$

$$\begin{array}{r} \frac{5}{6}r = -15 \cdot \frac{6}{5} \\ \underline{\frac{5}{6}} \quad \underline{\frac{6}{5}} \\ r = -18 \cdot \frac{6}{5} \end{array}$$

$$r = -18$$

8) $\frac{2}{3}s + 1\frac{1}{3} = \frac{7}{9}$

$$\begin{array}{r} \cancel{\frac{2}{3}s} + \frac{1}{3} = \frac{7}{9} \\ -\frac{1}{3} \quad -\frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} \frac{2}{3}s = -\frac{5}{9} \cdot \frac{3}{2} \\ \underline{\frac{2}{3}} \quad \underline{\frac{3}{2}} \end{array}$$

$$s = -\frac{15}{18} \div 3$$

$$s = -\frac{5}{6}$$