

Homework #53 – Multi-Step Equations

Directions: Solve the following equations, show the check when asked.

1. $-5c + 9c = -20$

$$\begin{array}{r} 4c = -20 \\ \underline{4 \quad 4} \\ c = -5 \end{array}$$

Check: $-5c + 9c = -20$
 $-5(-5) + 9(-5) = -20$
 $25 + (-45) = -20$
 $-20 = -20 \checkmark$

2. $36 = 6b - 6 + b$

$$\begin{array}{r} 36 = 7b - 6 \\ \underline{+6 \quad +6} \\ 42 = 7b \\ \underline{7 \quad 7} \end{array} \quad b = 6$$

3. $2(4x + 3) = 46$

$$\begin{array}{r} 8x + 6 = 46 \\ \underline{-6 \quad -6} \\ 8x = 40 \\ \underline{8 \quad 8} \end{array} \quad x = 5$$

4. $6(7k - 10) = 24$

$$\begin{array}{r} 42k - 60 = 24 \\ \underline{+60 \quad +60} \\ 42k = 84 \\ \underline{42 \quad 42} \\ k = 2 \end{array}$$

Check: $6(7k - 10) = 24$
 $6(7 \cdot 2 - 10) = 24$
 $6(14 - 10) = 24$
 $6(4) = 24$
 $24 = 24 \checkmark$

5. $4(g + 2) + 8g = 56$

$$\begin{array}{r} 4g + 8 + 8g = 56 \\ 12g + 8 = 56 \\ \underline{-8 \quad -8} \\ 12g = 48 \\ \underline{12 \quad 12} \\ g = 4 \end{array}$$

6. $6(2k + 5) - 3k = 66$

$$\begin{array}{r} 12k + 30 - 3k = 66 \\ 9k + 30 = 66 \\ \underline{-30 \quad -30} \\ 9k = 36 \\ \underline{9 \quad 9} \end{array} \quad k = 4$$