

**Solving Multi-Step Equations**

Date: \_\_\_\_\_

**Take each equation.**

1)  $2x + 3 = 11$

$$\begin{array}{r} 2x + 3 = 11 \\ -3 \quad -3 \\ \hline 2x = 8 \\ \div 2 \quad \div 2 \\ \hline x = 4 \end{array}$$

check:  
 $2(4) + 3 = 11$   
 $8 + 3 = 11$   
 $11 = 11$

2)  $3x - 5 = 10$

$$\begin{array}{r} 3x - 5 = 10 \\ +5 \quad +5 \\ \hline 3x = 15 \\ \div 3 \quad \div 3 \\ \hline x = 5 \end{array}$$

check:  
 $3(5) - 5 = 10$   
 $15 - 5 = 10$   
 $10 = 10$

3)  $4x + 7 = 21$

$$\begin{array}{r} 4x + 7 = 21 \\ -7 \quad -7 \\ \hline 4x = 14 \\ \div 4 \quad \div 4 \\ \hline x = 3.5 \end{array}$$

check:  
 $4(3.5) + 7 = 21$   
 $14 + 7 = 21$   
 $21 = 21$

4)  $2x - 1 = 9$

$$\begin{array}{r} 2x - 1 = 9 \\ +1 \quad +1 \\ \hline 2x = 10 \\ \div 2 \quad \div 2 \\ \hline x = 5 \end{array}$$

check:  
 $2(5) - 1 = 9$   
 $10 - 1 = 9$   
 $9 = 9$

5)  $5x + 2 = 17$

$$\begin{array}{r} 5x + 2 = 17 \\ -2 \quad -2 \\ \hline 5x = 15 \\ \div 5 \quad \div 5 \\ \hline x = 3 \end{array}$$

check:  
 $5(3) + 2 = 17$   
 $15 + 2 = 17$   
 $17 = 17$

6)  $3x - 4 = 8$

$$\begin{array}{r} 3x - 4 = 8 \\ +4 \quad +4 \\ \hline 3x = 12 \\ \div 3 \quad \div 3 \\ \hline x = 4 \end{array}$$

check:  
 $3(4) - 4 = 8$   
 $12 - 4 = 8$   
 $8 = 8$

7)  $2x + 5 = 13$

$$\begin{array}{r} 2x + 5 = 13 \\ -5 \quad -5 \\ \hline 2x = 8 \\ \div 2 \quad \div 2 \\ \hline x = 4 \end{array}$$

check:  
 $2(4) + 5 = 13$   
 $8 + 5 = 13$   
 $13 = 13$

8)  $4x - 3 = 15$

$$\begin{array}{r} 4x - 3 = 15 \\ +3 \quad +3 \\ \hline 4x = 18 \\ \div 4 \quad \div 4 \\ \hline x = 4.5 \end{array}$$

check:  
 $4(4.5) - 3 = 15$   
 $18 - 3 = 15$   
 $15 = 15$

9)  $3x + 1 = 10$

$$\begin{array}{r} 3x + 1 = 10 \\ -1 \quad -1 \\ \hline 3x = 9 \\ \div 3 \quad \div 3 \\ \hline x = 3 \end{array}$$

check:  
 $3(3) + 1 = 10$   
 $9 + 1 = 10$   
 $10 = 10$

10)  $2x - 6 = 14$

$$\begin{array}{r} 2x - 6 = 14 \\ +6 \quad +6 \\ \hline 2x = 20 \\ \div 2 \quad \div 2 \\ \hline x = 10 \end{array}$$

check:  
 $2(10) - 6 = 14$   
 $20 - 6 = 14$   
 $14 = 14$