

**Solving Multi-Step Equations**

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

**Take each equation.**

1)  $2x + 3 = 11$

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

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

2)  $3x - 5 = 10$

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

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

3)  $4x + 7 = 21$

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

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

4)  $5x - 2 = 18$

$$\begin{array}{r} 5x - 2 = 18 \\ +2 \phantom{=} \\ \hline 5x = 20 \\ \div 5 \phantom{=} \\ \hline x = 4 \end{array}$$

check:  
 $5(4) - 2 = 18$   
 $20 - 2 = 18$   
 $18 = 18$

5)  $6x + 9 = 33$

$$\begin{array}{r} 6x + 9 = 33 \\ -9 \phantom{=} \\ \hline 6x = 24 \\ \div 6 \phantom{=} \\ \hline x = 4 \end{array}$$

check:  
 $6(4) + 9 = 33$   
 $24 + 9 = 33$   
 $33 = 33$

6)  $7x - 4 = 26$

$$\begin{array}{r} 7x - 4 = 26 \\ +4 \phantom{=} \\ \hline 7x = 30 \\ \div 7 \phantom{=} \\ \hline x = 4.2857 \end{array}$$

check:  
 $7(4.2857) - 4 = 26$   
 $29.9999 - 4 = 26$   
 $26 = 26$

7)  $8x + 5 = 41$

$$\begin{array}{r} 8x + 5 = 41 \\ -5 \phantom{=} \\ \hline 8x = 36 \\ \div 8 \phantom{=} \\ \hline x = 4.5 \end{array}$$

check:  
 $8(4.5) + 5 = 41$   
 $36 + 5 = 41$   
 $41 = 41$

8)  $9x - 7 = 35$

$$\begin{array}{r} 9x - 7 = 35 \\ +7 \phantom{=} \\ \hline 9x = 42 \\ \div 9 \phantom{=} \\ \hline x = 4.6667 \end{array}$$

check:  
 $9(4.6667) - 7 = 35$   
 $42 - 7 = 35$   
 $35 = 35$

9)  $10x + 3 = 53$

$$\begin{array}{r} 10x + 3 = 53 \\ -3 \phantom{=} \\ \hline 10x = 50 \\ \div 10 \phantom{=} \\ \hline x = 5 \end{array}$$

check:  
 $10(5) + 3 = 53$   
 $50 + 3 = 53$   
 $53 = 53$

10)  $11x - 6 = 64$

$$\begin{array}{r} 11x - 6 = 64 \\ +6 \phantom{=} \\ \hline 11x = 70 \\ \div 11 \phantom{=} \\ \hline x = 6.3636 \end{array}$$

check:  
 $11(6.3636) - 6 = 64$   
 $70 - 6 = 64$   
 $64 = 64$