

Solving Multi-Step Equations

Date: _____

Solve each equation.

1) $4x + 3 = 15$

$$\begin{array}{r} 4x + 3 = 15 \\ -3 \\ \hline 4x = 12 \\ \div 4 \\ \hline x = 3 \end{array}$$

check:
 $4(3) + 3 = 15$
 $12 + 3 = 15$
 $15 = 15$

2) $2x + 1 = 5$

$$\begin{array}{r} 2x + 1 = 5 \\ -1 \\ \hline 2x = 4 \\ \div 2 \\ \hline x = 2 \end{array}$$

check:
 $2(2) + 1 = 5$
 $4 + 1 = 5$
 $5 = 5$

3) $3x + 2 = 11$

$$\begin{array}{r} 3x + 2 = 11 \\ -2 \\ \hline 3x = 9 \\ \div 3 \\ \hline x = 3 \end{array}$$

check:
 $3(3) + 2 = 11$
 $9 + 2 = 11$
 $11 = 11$

4) $5x + 1 = 16$

$$\begin{array}{r} 5x + 1 = 16 \\ -1 \\ \hline 5x = 15 \\ \div 5 \\ \hline x = 3 \end{array}$$

check:
 $5(3) + 1 = 16$
 $15 + 1 = 16$
 $16 = 16$

5) $2x + 3 = 13$

$$\begin{array}{r} 2x + 3 = 13 \\ -3 \\ \hline 2x = 10 \\ \div 2 \\ \hline x = 5 \end{array}$$

check:
 $2(5) + 3 = 13$
 $10 + 3 = 13$
 $13 = 13$

6) $4x + 1 = 9$

$$\begin{array}{r} 4x + 1 = 9 \\ -1 \\ \hline 4x = 8 \\ \div 4 \\ \hline x = 2 \end{array}$$

check:
 $4(2) + 1 = 9$
 $8 + 1 = 9$
 $9 = 9$

7) $3x + 4 = 16$

$$\begin{array}{r} 3x + 4 = 16 \\ -4 \\ \hline 3x = 12 \\ \div 3 \\ \hline x = 4 \end{array}$$

check:
 $3(4) + 4 = 16$
 $12 + 4 = 16$
 $16 = 16$

8) $5x + 2 = 17$

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

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

9) $2x + 5 = 15$

$$\begin{array}{r} 2x + 5 = 15 \\ -5 \\ \hline 2x = 10 \\ \div 2 \\ \hline x = 5 \end{array}$$

check:
 $2(5) + 5 = 15$
 $10 + 5 = 15$
 $15 = 15$

10) $3x + 1 = 10$

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

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