

Name: KEY
 Date: _____

6.1B Worksheet

Solve each equation. Show all work.

1) $3x + 5 = 11$
 $\begin{array}{r} -5 \\ \hline 3x + 6 \\ \hline 3 \end{array}$
 $x = 2$

Check for #1

LS	RS
$3x + 5$	11
$3(2) + 5$	
$6 + 5$	
11	

✓

2) $2y - 4 = 10$
 $\begin{array}{r} +4 \\ \hline 2y = 14 \\ \hline 2 \end{array}$
 $y = 7$

3) $-p + 7 = -1$
 $\begin{array}{r} -7 \\ \hline -p = -8 \\ \hline -1 \end{array}$
 $p = 8$

4) $-5m - 8 = -13$
 $\begin{array}{r} +8 \\ \hline -5m = -5 \\ \hline -5 \end{array}$
 $m = 1$

5) $+3 - 3w = 15$ Check for #5

LS	RS
$3 - 3w$	15
$3 - 3(4)$	
$3 - 12$	
-9	

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

✓

6) $18 = -4 - 11x$
 $\begin{array}{r} +4 \\ \hline 18 = -11x \\ \hline +4 \\ 22 = -11x \\ \hline -11 \quad -11 \end{array}$
 $-2 = x$

7) $\frac{x}{2} + 7 = 5$ Check for #7

LS	RS
$\frac{x}{2} + 7$	5
$\frac{4}{2} + 7$	
$2 + 7$	
9	

$\begin{array}{r} \frac{x}{2} + 7 = 5 \\ -7 \quad -7 \\ \hline \frac{x}{2} = -2(2) \\ \hline x = -4 \end{array}$

✓

8) $\frac{y}{-3} - 4 = 1$
 $\begin{array}{r} +4 \\ \hline \frac{y}{-3} = 5 \\ \hline -3 \end{array}$
 $y = -15$

9) $3 + \frac{m}{3} = 5$
 $\begin{array}{r} -3 \\ \hline \frac{m}{3} + 3 = 5 \\ \hline -3 \quad -3 \\ \frac{m}{3} = 2(3) \\ \hline m = 6 \end{array}$

Solve each equation. Show all work.

10) $3 + 4m - 6m = 11$

$$\begin{array}{r} -2m + 3 = 11 \\ \quad \quad \quad -3 \end{array}$$

$$\begin{array}{r} -2m = 8 \\ \quad \quad \quad -2 \end{array}$$

$$m = -4$$

11) $3x - 8 + 3x = -25 - 1$

$$\begin{array}{r} 6x - 8 = -26 \\ \quad \quad \quad +8 \end{array}$$

$$\begin{array}{r} 6x = -18 \\ \quad \quad \quad \div 6 \end{array}$$

$$x = -3$$

12) $1.4w - 3.7 = 3.3$

$$\begin{array}{r} +3.7 \quad | \quad +3.7 \\ 1.4w = 7 \\ \quad \quad \quad \div 1.4 \end{array}$$

$$w = 5$$

13) $\frac{p}{2} - \frac{1}{4} = -\frac{3}{4}$

$$\begin{array}{r} +\frac{1}{4} \quad | \quad +\frac{1}{4} \\ \frac{p}{2} = -\frac{2}{4} \end{array}$$

$$\begin{array}{r} \frac{p}{2} = -\frac{1}{2} \left(\frac{2}{1} \right) \end{array}$$

$$p = -1$$

14) $3 + \frac{m}{2} - 6 = 2 - (-3)$

$$\begin{array}{r} \frac{m}{2} - 3 = 5 \\ \quad \quad \quad +3 \end{array}$$

$$\begin{array}{r} \frac{m}{2} = 8(2) \end{array}$$

$$m = 16$$

15) $13 = 2x - 5x - 5$

$$\begin{array}{r} 13 = -3x - 5 \\ +5 \quad \quad \quad +5 \end{array}$$

$$\begin{array}{r} 18 = -3x \\ \quad \quad \quad \div -3 \end{array}$$

$$-6 = x$$

16) Do a check for #10

LS	RS
$3 + 4m - 6m$	11
$3 + 4(-4) - 6(-4)$	
$3 - 16 + 24$	
$-13 + 24$	
11	✓

17) $\frac{3m}{2} + 10 = -8$

$$\begin{array}{r} -10 \quad | \quad -10 \end{array}$$

$$\begin{array}{r} \frac{3m}{2} = -18(2) \end{array}$$

$$\begin{array}{r} 3m = -36 \\ \quad \quad \quad \div 3 \end{array}$$

$$m = -12$$