

Name _____

Mixed Review of Solving Equations

One Step Equations:

1) $x + 7 = 8$

2) $x - 3 = 41$

3) $-3x = 48$

4) $\frac{x}{4} = -45$

5) $-x = 6$

Two Step Equations

6) $3x + 5 = 4$

7) $8 - 2x = 30$

8) $2x + 6x = 48$

9) $6x + 5 - 2x = -19$

Variables on Both Sides:

10) $4x = 3x + 5$

11) $3x + 2 = 2x - 6$

12) $6x + 5x - 4 = 2x - 8$

Parenthesis:

13) $3(x + 5) = 8x$

14) $-2(x + 7) = 9x$

15) $9(3 + x) = 4(3 + x)$

Mixed Practice

Solve for the variable and check your answers.

1) $\frac{b}{-5} = 11$

2) $5x = 9x - 16$

3) $18n + 12 = 27n + 3$

4) $5(x + 7) = 6(x - 5)$

5) $4(3 - u) + u = 22 + 2u$

6) $5c - 4 - 2c + 1 = 8c + 2$

Name Answer Key

Mixed Review of Solving Equations

One Step Equations:

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

$$\begin{array}{r} 2) \ x - 3 = 41 \\ +3 \ +3 \\ \hline x = 44 \end{array}$$

$$\begin{array}{r} 3) \ -3x = 48 \\ -3 \ -3 \\ \hline x = -16 \end{array}$$

$$\begin{array}{r} 4) \ \frac{x}{4} = -45 \\ \times 4 \ \times 4 \\ \hline x = -180 \end{array}$$

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

Two Step Equations

$$\begin{array}{r} 6) \ 3x + 5 = 4 \\ -5 \ -5 \\ \hline 3x = -1 \\ \div 3 \ \div 3 \\ \hline x = -\frac{1}{3} \end{array}$$

$$\begin{array}{r} 7) \ 8 - 2x = 30 \\ -8 \ -8 \\ \hline -2x = 22 \\ \div -2 \ \div -2 \\ \hline x = -11 \end{array}$$

$$\begin{array}{r} 8) \ 2x + 6x = 48 \\ \checkmark \\ 8x = 48 \\ \div 8 \ \div 8 \\ \hline x = 6 \end{array}$$

$$\begin{array}{r} 9) \ 6x + 5 - 2x = -19 \\ 4x + 5 = -19 \\ -5 \ -5 \\ \hline 4x = -24 \\ \div 4 \ \div 4 \\ \hline x = -6 \end{array}$$

Variables on Both Sides:

$$\begin{array}{r} 10) \ 4x = 3x + 5 \\ -3x \ -3x \\ \hline x = 5 \end{array}$$

$$\begin{array}{r} 11) \ 3x + 2 = 2x - 6 \\ -2x \ -2x \\ \hline x = -8 \end{array}$$

$$\begin{array}{r} 12) \ 6x + 5x - 4 = 2x - 8 \\ 11x - 4 = 2x - 8 \\ -2x \ -2x \\ \hline 9x - 4 = -8 \\ +4 \ +4 \\ \hline 9x = -4 \\ \div 9 \ \div 9 \\ \hline x = -\frac{4}{9} \end{array}$$

Parenthesis:

$$\begin{array}{r} 13) \ 3(x + 5) = 8x \\ 3x + 15 = 8x \\ -3x \ -3x \\ \hline 15 = 5x \\ \div 5 \ \div 5 \\ \hline x = 3 \end{array}$$

$$\begin{array}{r} 14) \ -2(x + 7) = 9x \\ -2x - 14 = 9x \\ +2x \ +2x \\ \hline -14 = 11x \\ \div 11 \ \div 11 \\ \hline x = -\frac{14}{11} \end{array}$$

$$\begin{array}{r} 15) \ 9(3 + x) = 4(3 + x) \\ 27 + 9x = 12 + 4x \\ -12 \ -12 \\ \hline 15 + 9x = 4x \\ -9x \ -9x \\ \hline 15 = -5x \\ \div -5 \ \div -5 \\ \hline x = -3 \end{array}$$

Mixed Practice

Solve for the variable and check your answers.

$$\begin{array}{r} 1) \ \frac{b}{-5} = 11 \\ \times (-5) \ \times (-5) \\ \hline b = -55 \end{array}$$

$$\begin{array}{r} 2) \ 5x = 9x - 16 \\ -9x \ -9x \\ \hline -4x = -16 \\ \div -4 \ \div -4 \\ \hline x = 4 \end{array}$$

$$\begin{array}{r} 3) \ 18n + 12 = 27n + 3 \\ -18n \ -18n \\ \hline 12 = 9n + 3 \\ -3 \ -3 \\ \hline 9 = 9n \\ \div 9 \ \div 9 \\ \hline n = 1 \end{array}$$

$$\begin{array}{r} 4) \ 5(x + 7) = 6(x - 5) \\ 5x + 35 = 6x - 30 \\ -5x \ -5x \\ \hline 35 = x - 30 \\ +30 \ +30 \\ \hline 65 = x \end{array}$$

$$\begin{array}{r} 5) \ 4(3 - u) + u = 22 + 2u \\ 12 - 4u + u = 22 + 2u \\ 12 - 3u = 22 + 2u \\ +3u \ +3u \\ \hline 12 = 22 + 5u \\ -22 \ -22 \\ \hline -10 = 5u \\ \div 5 \ \div 5 \\ \hline u = -2 \end{array}$$

$$\begin{array}{r} 6) \ 5c - 4 - 2c + 1 = 8c + 2 \\ 3c - 3 = 8c + 2 \\ -3 \ -3 \\ \hline 3c = 8c + 5 \\ -8c \ -8c \\ \hline -5c = 5 \\ \div -5 \ \div -5 \\ \hline c = -1 \end{array}$$