

Warm-up 8-23

1. $\frac{-3x}{-3} = \frac{10}{-3}$

$$x = \frac{-10}{3}, -3\frac{1}{3}$$

2. $\frac{-5x}{-5} = \frac{25}{-5}$

$$x = -5$$

$$\begin{aligned} -5(-5) &= 25 \\ 25 &= 25 \checkmark \end{aligned}$$

3. $x + 14 = 28$

$$\begin{array}{r} 2 \quad 4 \\ -14 \quad -14 \\ \hline 2 \quad 2 \end{array}$$

$$x = 0$$

4. $-10 + x = 36$

$$\begin{array}{r} x - 10 = 36 \\ +10 \quad +10 \\ \hline x = 46 \end{array}$$

Variables on both sides of the Equation

$$\begin{array}{r} 7m = 4m + 15 \\ -4m \quad -4m \\ \hline \end{array}$$

$$\frac{3m}{3} = \frac{15}{3}$$

$$m = 5$$

1. Get all letters on one side of the equation.
2. Isolate variable by performing reverse order of operations

Try These!

1.) $6x = 4x - 10$

2.) $-5x - 7 = 13$

3.) $-3x = 2x - 15$

4.) $-9x - 29 = 7x + 8$

Variables in the Denominator

$$\cancel{m} \frac{27}{\cancel{m}} = 3 m$$

$$27 = 3m$$

$$\frac{27}{m} \begin{matrix} \nearrow \\ \searrow \end{matrix} \frac{3}{1}$$

$$1(27) = m(3)$$

$$27 = 3m$$

1. Move the variable to the numerator by multiplying by the variable on both sides
OR cross multiplying

Homework

pg. 15-16 #2, 5-8, 11, 16-17

Algebra Practice Problems

Name: _____

Date: _____

Worksheet generated at www.math.com

1.) $8 = x + 1$

2.) $x + 7 = 11$

3.) $x + 3 = 11$

4.) $-5 + x = -\frac{43}{8}$

5.) $x / 4 = -7$

6.) $2x + 6 = 8$

7.) $-2x + 2 = -6$

8.) $4x + 5 = 1$

9.) $-7x - \frac{3}{8} = -\frac{619}{8}$

10.) $1 + 2x = 15$

11.) $-7x - 1 + 6x = -5$

12.) $-9 + 7x = -2x - 72$

13.) $4 - x = 5x - 26$

14.) $2x + 8 = -x + 44$

Name: _____

Date: _____

Algebra Practice Problems - ANSWERS

1) $8 = x + 1$ **answer:** $x = 7$

2) $x + 7 = 11$ **answer:** $x = 4$

3) $x + 3 = 11$ **answer:** $x = 8$

4) $-5 + x = -\frac{43}{8}$ **answer:** $x = -\frac{3}{8}$

5) $x / 4 = -7$ **answer:** $x = -28$

6) $2x + 6 = 8$ **answer:** $x = 1$

7) $-2x + 2 = -6$ **answer:** $x = 4$

8) $4x + 5 = 1$ **answer:** $x = -1$

9) $-7x - \frac{3}{8} = -\frac{619}{8}$ **answer:** $x = 11$

10) $1 + 2x = 15$ **answer:** $x = 7$

11) $-7x - 1 + 6x = -5$ **answer:** $x = 4$

12) $-9 + 7x = -2x - 72$ **answer:** $x = -7$

13) $4 - x = 5x - 26$ **answer:** $x = 5$

14) $2x + 8 = -x + 44$ **answer:** $x = 12$