

## Warm Up

1)  $(6x - 4) - 2 = -2(-4x + 5) - 2x$

$$6x - 4 - 2 = 8x - 10 - 2x$$

$$6x - 6 = 6x - 10 - 6 = 5$$

(No solution)  
F

2)  $3y = 3y$

$$-3y - 3y$$

$$0 = 0$$

R

Identity

3)  $-2x + 4x - 20 = -(2x + 1)$

$$2x - 20 = -2x - 1$$

$$+2x \quad +2x$$


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$$-20 = -4x - 1$$

$$+1 \quad +1$$

$$-19 = -4x$$

$$\frac{-19}{-4} = \frac{-4x}{-4}$$

$$x = \frac{19}{4}$$

## Homework Questions?

$$12) \quad \frac{5}{7}y - 15 = 5y + 30$$

$$-\frac{5}{7}y \quad -\frac{5}{7}y$$

$$-15 = \frac{30}{7}y + 30$$

$$-30 \quad -30$$

$$\frac{7}{30} \cdot -45 = \frac{30}{7}y \cdot \frac{7}{30}$$

$$y =$$

On the top of your paper (by your name) rate yourself for this section:

**4 - I can summarize the concepts and explain it to others**

**3 - I can apply the concept to answer questions correctly**

**2 - I can apply the concepts but with some mistakes**

**1 - I need help and know how to apply the concept**

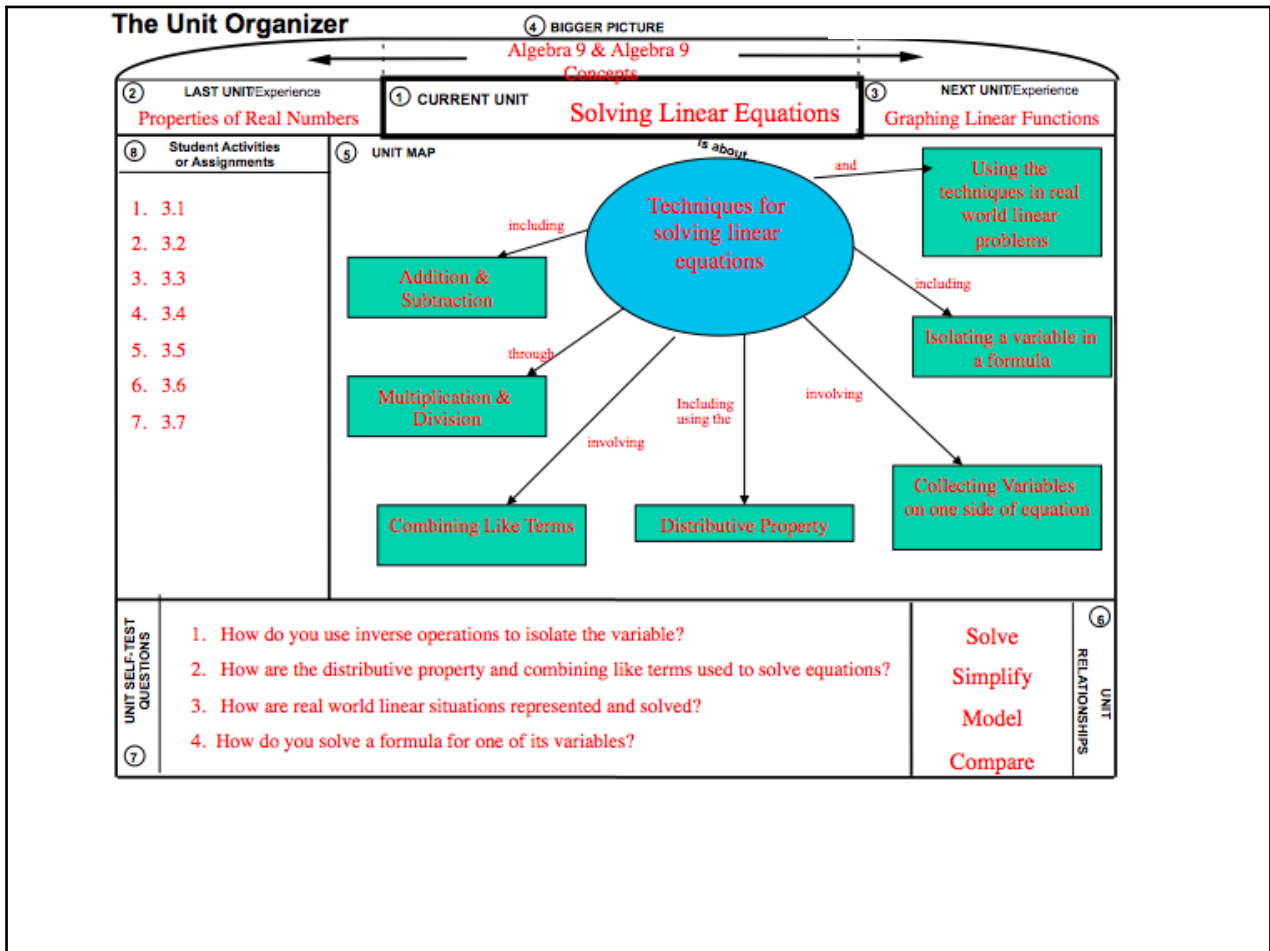
**0 - I can't apply the concept, even with help**

\*Rating of 0-2 is a warning signal to me that you need help\*

## 3.6 Solving Decimal Equations

**Goal:** • Find exact and approximate solutions of equations that contain decimals.

**EQ:** Solve  $-16x - 18 = 3$ . Round answer to the nearest hundredth.



## Vocabulary

**Round-off error:** answers not exact

$\approx$  means approximately =

When do you round up?

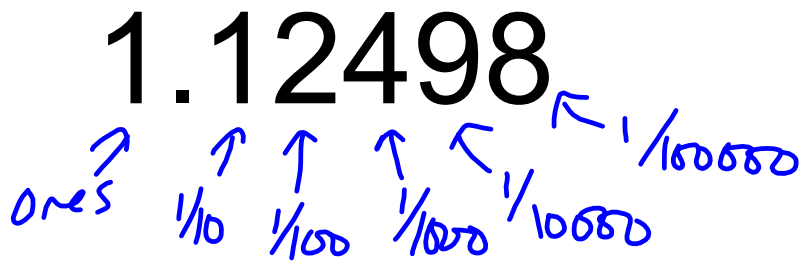
The next digit is 5 or higher

When do you round down?

(Stay the same)

The next digit is 4 or lower

Label each place value:



Round to Hundredth:

3.14159	33.896	13.006	2.996
<u>3.14</u>	<u>33.90</u>	<u>13.01</u>	<u>3.00</u>

**Example** Solve. Round to the nearest hundredth.

$$-48x + 31 = 124$$

$$\begin{array}{r} -31 \quad -31 \\ -48x + 31 = 124 \\ \hline -48x = 93 \end{array}$$

$$x = -1.9375$$

$$x \approx -1.94$$

Sub In:

$$\begin{array}{l} -48(-1.94) + 31 = 124 \\ 124.12 \approx 124 \checkmark \end{array}$$

$$100(3.58x - 37.40 = 0.23x + 8.32)$$

$$\begin{array}{r} 358x - 3740 = 23x + 832 \\ -23x \quad -23x \end{array}$$

$$\begin{array}{r} 335x - 3740 = 832 \\ +3740 \quad +3740 \end{array}$$

$$\begin{array}{r} 335x = 4572 \\ \hline 335 \quad 335 \end{array}$$

$$x = 13.64776119$$

$$x \approx 13.65$$

**Example**

Three people want to share equally in the cost of a pizza. The pizza costs \$12.89. Find each person's share.

$$\frac{12.89}{3} = 4.296666\dots$$

↑

**\$4.30**

**Try It**

Solve the equation. Round to the nearest hundredth.

$$11x - 5 = 26$$

$$\begin{array}{r} +5 \quad +5 \\ \hline \end{array}$$

$$\frac{11x}{11} = \frac{31}{11}$$

$$x = 2.818181\dots$$

↑

$$x \approx 2.82$$

$$6.26x - 54.89 = 0.86x + 9.76$$

$$-48 = 13n + 14$$

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

$$\frac{-62}{13} = \frac{13n}{13}$$

$$n = -4.769230\dots$$

↑

$$n \approx -4.77$$

$$12.78 + 2.75 = 5.26 + 7.23x$$

**Example** Solve. Round to the nearest tenth.

$$3.7 - 8.4x = 1.2x + 35.9$$

**Try It** Solve. Round to the nearest tenth.

$$7.2x + 1.3 = 3.8 + 4.2x$$

$$0.97y - 0.29 = 0.83y$$

**Explore**

Solve the following in two ways:

1. Round on every step.
2. Round only on the last step.

$$18.42x - 12.75 = (5.32x - 6.81) 3.46$$

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## 3.6 Summary

**EQ:** Solve  $-16x - 18 = 3$ . Round answer to the nearest hundredth.

## 3.6 Homework

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