

AGENDA

Warm-Up

Pods, Pads,
Phones

Bell Notes:

Percent of
Change

Formation

Structure

Solution

HOMEWORK

Squares

WARM UP COPY and SOLVE

1. $3.4 + (-7.4)$

2. $-8.4 + (-1.1)$

3. $3.4 - 7.4$

4. $-8.4 - 1.1$

5. A submarine is cruising 275 miles below sea level. A diving team was sighted 90 miles below the submarine's position. How far is the diving team away from the surface?

Since the release of iPhones, iPods and iPads, Apple has been an impact player in the technology market. Below are the estimated reported profits of Apple for 2009 and 2012.

2009: \$37 (\$36.54) billion
2012: \$157 (\$156.51) billion

1. What is the difference between the profits in 2009 and 2012?
2. Did the profits increase or decrease?
3. What percentage of the 2009 profits did the difference represent?

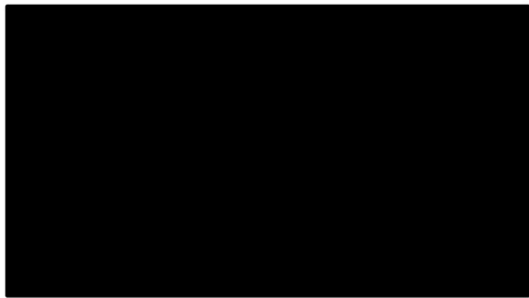
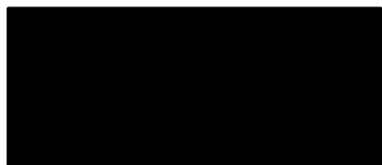

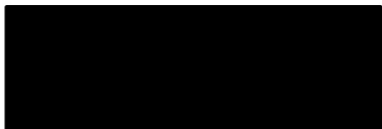

Topic: Percent of Change	<u>Lesson Essential Question:</u> How do we identify and calculate an increase or decrease our number system?	
What is PERCENT OF CHANGE?	PERCENT OF CHANGE is the amount of increase or decrease to its' original quantity.	EXAMPLE On Saturday, the temperature was 56°F in Orlando, FL. On Sunday, the temperature rose to 70°F. What is the percent of change between the two days?
Looks Like...	$\frac{\text{DIFFERENCE}}{\text{ORIGINAL}} = \frac{\text{PERCENT}}{100}$	
What do I do?	<ul style="list-style-type: none"> ○ Subtract ORIGINAL and NEW (DIFFERENCE) ○ DIFFERENCE as numerator and ORIGINAL as denominator ○ Cross Multiply <div style="background-color: #cccccc; padding: 5px; text-align: center;"> Was this an INCREASE (Mark up) or DECREASE (Mark down)? </div>	

**TEAM
PRACTICE**

Find the percent of discount.
Round to the nearest whole percent.

regular price: \$120


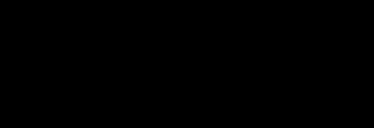

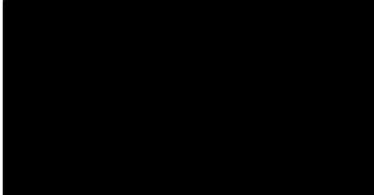

sale price: \$105.50

Information	Picture	Solution
Original: \$120.00		
New: \$105.50		
		

Find the percent of increase.
Round to the nearest whole percent.

regular price: \$120

sale price: \$150

Information	Picture	Solution
Original: \$120.00		
New: \$150.00		
		

Lesson Notes

Percent of Change – when an increase or decrease is expressed as a percent.

Find the percent of change:

- Find the amount of change.
- Put the change in the numerator.
- Put original (beginning, first) number in the denominator.
- Solve proportion.

Example

Original: 85 New: 112

a. $112 - 85 = 27$

b. $x = \frac{\text{change}}{\text{original}}$

c. $x = \frac{27}{85}$

$100\left(\frac{27}{85}\right) = 85x$

$31.7647... = x$ about 32% increase

1. The Nietos bought a house several years ago for \$120,000. This year, they sold it for \$150,000. Find the percent of increase.

2. Johnson Middle School had 240 students last year. This year, there are 192 students. Find the percent of change. State whether this percent of change is an *increase* or a *decrease*.

3. Shirts bought by a sporting goods store cost them \$20 per shirt. They want to mark them up 40%. What will be the selling price?

4. A computer usually sells for \$1,200. This week it is on sale for 30% off. What is the sale price?

Fill in the proportion with the correct pieces

The image shows a proportion problem with several pieces to be placed in a grid. The grid is as follows:

<hr/>	<hr/>		

The proportion is represented by the first two rows of the grid. The first row contains a red hexagon with the letter 'x' and an empty red hexagon. The second row contains a horizontal line and another empty red hexagon. To the right of the proportion are three red hexagons: 'Original 35', 'new 70', and 'difference 70 - 35 = 35'. Below the proportion are two more red hexagons: '100' and an empty one. The 'difference' hexagon is positioned between the '100' and the empty hexagon in the bottom row.

Fill in the proportion with the correct pieces

The image shows a proportion puzzle on a grey grid background. The puzzle consists of a proportion with two fractions separated by an equals sign. The left fraction has a red hexagon with the letter 'x' in the numerator and a red hexagon with the number '100' in the denominator. The right fraction has two empty red hexagons, one in the numerator and one in the denominator. To the right of the proportion are four red hexagonal pieces that can be used to complete the proportion:

- A piece with the text "new 77" (intended for the top-right position).
- A piece with the text "difference 91 - 77 = 14" (intended for the bottom-right position).
- A piece with the text "Original 91" (intended for the bottom-right position).
- An empty red hexagon (intended for the top-right position).

Find each percent of change (round to the nearest whole percent if necessary). State whether the percent of change is an increase or decrease.

1

Original 35 students
New 28 students

2

Original \$84
New \$100

WARM UP COPY and SOLVE

1. 20% of 50? 2. 23 is what percent of 10?

-
3. If a population grows from 50 to 55 thousand in a year, what percent did it grow?

4. Find the total bill.

Food Bill: \$66.96

Tip: 15%

AGENDA

Warm-Up

WE THROWS

Well Notes:

Percent of Error

Information

Structure

Solution

HOMEWORK

problems

Commercial Break

<https://www.youtube.com/watch?v=W-K7q1dfzps>

What is Commission?

How will we calculate commission?

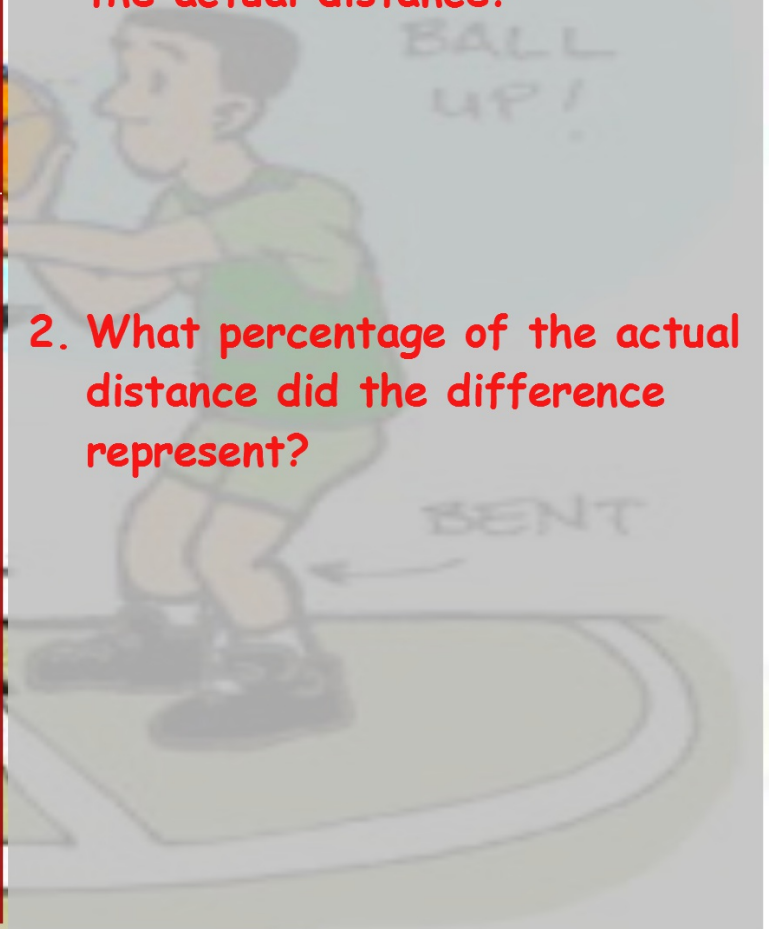
What else do we calculate the same way?

John is selling sets of knives and makes a 10% commission on all sales. What would his commission be on the sale of a \$3250 set of knives?

Jaylen wants to practice his free throws for Thursday's game. He estimates the distance from the free-throw line to the hoop and marks it with tape. Jaylen's estimate was 13.5 feet. The actual distance is 15 feet.

1. What is the difference between Jaylen's estimate and the actual distance?

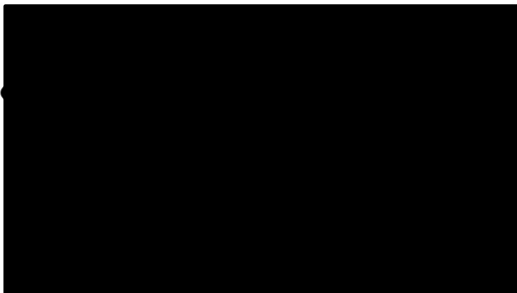

2. What percentage of the actual distance did the difference represent?



<p>Topic: Percent of Error</p>	<p><u>Lesson Essential Question:</u> How do we identify and calculate an increase or decrease our number system?</p>	
<p>What is PERCENT OF ERROR?</p>	<p>PERCENT OF ERROR is the amount of inaccuracy, or error, compared to the actual amount.</p>	<p>EXAMPLE</p> <p>Suppose you guess there are three hundred M&Ms in a jar, but there are actually four hundred. What's your error?</p>
<p>Looks Like...</p>	$\frac{\text{DIFFERENCE}}{\text{ACTUAL}} = \frac{\text{PERCENT}}{100}$	
<p>What do I do?</p>	<ul style="list-style-type: none"> ○ Subtract ACTUAL and ESTIMATE (DIFFERENCE) ○ DIFFERENCE as numerator and ACTUAL as denominator ○ Cross Multiply and Solve 	

**TEAM
PRACTICE**

Mrs. Harris estimates her dog to weigh to be 120 pounds. Her dog's actual weight is 100 pounds. What is her percent error?

Information	Picture	Solution
Estimate: 120 lbs Actual: 100 lbs		

Find each percent of change (round to the nearest whole percent if necessary). State whether the percent of change is an increase or decrease.

3

Actual 1.6
Estimate 0.95

4

Actual 20.5
Estimate 35.5

