

Using Percents

January 23, 2017

Mr. Collin



Announcements

- Today will be game day (Jeopardy)
- Tomorrow, those who have not finished the iReady assessment will do that in class
 - The rest of the class will work on a review worksheet



Announcements

- Project is due Friday!
 - Those who did not bring it will not play game day on Friday
- I will be here after school today and Wednesday for tutoring
- Test is on February 8/9
 - Don't forget to make your "cheat sheet" for it!

Percent Change

January 25/26, 2017

Mr. Collin



Warmup

Write an equation for each, then solve:

1) 32 is what percent of 80?

$$32 = \frac{x \cdot 80}{80} \quad x = 0.4 \quad x = 40\%$$

2) 70 is 28% of what number?

$$70 = 0.28x \quad 70 \div 0.28 = 250$$

3) What number is 14% of 90?

$$x = 0.14 \cdot 90$$

$$x = 12.6$$



Trade and Grade

- If you received a stamp, you will trade your homework with the person sitting next to you (or someone else near you)
- When you get another person's homework, write your name in the "Corrected By" line at the bottom



Trade and Grade

1a) 0.08

1b) \$10.40

1c) \$119.60

2a) 0.2 (or 0.20)

2b) \$12.40

2c) \$74.40

3a) 0.4 (or 0.40)

3b) \$19.98

3c) \$29.97

4a) 0.28

4b) \$151.20

4c) \$388.80

5a) 0.06

5b) \$32.40

5c) \$572.40



Trade and Grade

- If eight or more answers are correct and there is a stamp on the page, write “4” in the score box
- If seven or fewer answers are correct, then write “2” in the score box



Percent Change

Let's look at a problem:

A population of a small town was 1,200 ten years ago, but has increased to 1,500 this year. What is the percent change of the population of the town?

$$1500 - 1200 = 300$$

$$\frac{300}{1200} = 0.25 \rightarrow 25\%$$



Percent Change

We can use a formula to calculate percent change:

$$\text{Pct. Change} = \frac{\text{New Value} - \text{Old Value}}{\text{Old Value}}$$



Let's Try Another

An endangered species was counted ten years ago and there were 823 specimens left in the wild. This year, there are only 717 specimens left. What is the percent change of the population, rounded to a tenth of a percent?



Percent of Decrease

- If you get a negative answer, you can call it a “Percent of Decrease”
- In the last problem, we could say the percent change was -12.9% or we could say that the population decreased by 12.9%



Now You Try

In 2000, gasoline cost an average of \$1.48 per gallon nationwide. In 2016, gasoline cost an average of \$2.14 per gallon nationwide. What was the percent change in the cost of gasoline from 2000 to 2016, rounded to a tenth of a percent?



One More Practice

A surround sound system that normally sold for \$270 is now being sold for \$220 instead. What is the percent change in the price of the surround sound system, rounded to a tenth of a percent?



Percent Error

- One way that we can use percent change is calculating percent error
- Anybody watch *The Price Is Right*?



Percent Error

What does this package of M&M's cost?

\$1.29





Percent Error

What does this new Toyota Camry cost?





Percent Error

- Would you find it odd if someone's guess of the price of the M&M's was off by the same amount of money as the guesses for the car?



Percent Error

- We can calculate the percent error the same way we calculate percent change
- Let's calculate our percent error for the cost of the M&M's and the car



Let's Try Again

What is the cost of this Whirlpool washing machine?

\$850



Percent Change

January 27, 2017

Mr. Collin



Warmup

- 1) A school's enrollment increased from 650 to 700. What was the percent change, rounded to one decimal?
- 2) A blender that normally costs \$200 is on sale for \$150. What is the percent change of the cost?



Trade and Grade

- If you received a stamp, you will trade your homework with the person sitting next to you (or someone else near you)
- When you get another person's homework, write your name in the "Corrected By" line at the bottom



Trade and Grade

1) 54.9%

2) 12.7%

3) -30.9%

4) 6.3%

5) 13.3%

6) -27.5%

7) -23.1%

8) -10.7%



Trade and Grade

- If five or more answers are correct and there is a stamp on the page, write “4” in the score box
- If four or fewer answers are correct, then write “2” in the score box