Bellringer: December 8, 2015

Remember what it looks like to be "ready to learn":

- Put your bag under your desk.
- Sharpen your pencils(no pens).
- Write down your homework.
- Update your Table of Contents.
- If you are turning your blackout in early, please put it in the drawer.

DMR:

- Complete the problems below independently. Be ready to discuss. If you finish early, complete yesterday's practice (pg. 5).

Fraction	Decimal	Percent
$\frac{2}{15}$	$0.1\overline{3}$ $\xrightarrow{\times 100}$	$13.\overline{3}\%$ or $13\frac{1}{3}\%$
$\frac{8}{1000}$ or $\frac{4}{5}$ or $\frac{8}{100}$ $\rightarrow$	0.008 $\xleftarrow{\div 100}$	$\frac{4}{5}\% = 0.8\%$
$\frac{103.5}{100}$ or $\frac{1035}{1000} = \frac{35}{1000}$	1.035 $\xrightarrow{\times 100}$	103.5%

OUTCOMES:

- I can convert between fractions, decimals, and percents, including percents that are less than 1% and greater than 100%.
- I can solve real world problems involving percents.
- I can ensure that all are engaged in today's lesson by...

DISCUSSION

* AS A PERCENT, HOW DOES THE VALUE OF A NICKEL COMPARE TO THE VALUE OF A DOLLAR? 5%

$\frac{1}{20} = \frac{5}{100} = 5\%$

VOCABULARY:

**PART: A nickel is part of a dollar. $.05

**WHOLE:

*IN OUR COMPARISON OF THE VALUE OF A NICKEL TO THE VALUE OF A DOLLAR, WHICH IS THE PART AND WHICH IS THE WHOLE?

Lesson 2: Part of a Whole as a Percent

Classwork

Opening Exercise

a. What is the whole unit in each scenario? identify

Scenario	Whole Unit
15 is what percent of 90?	90
What number is 10% of 56?	56
90% of a number is 180.	X
A bag of candy contains 300 pieces and 25% of the pieces in the bag are red. (total)	300
Seventy percent (70%) of the students earned a B on the test.	y
The 20 girls in the class represented 55% of the students in the class.	n

b. Read each problem and complete the table to record what you know.

Problem	Part	Percent	Whole
40% of the students on the field trip love the museum. If there are 20 students on the field trip, how many love the museum?	?	40%	20
40% of the students on the field trip love the museum. If 20 students love the museum, how many are on the field trip?	20	40%	?
20 students on the field trip love the museum. If there are 40 students on the field trip, what percent love the museum?	20	?	40

example 1

In Ty's math class, 20% of students earned an A on a test. If there were 30 students in the class, how many got an A?

Steps

1. identify the part, whole, & %
2. set up your equation
   part = % · whole
3. solve

$P = ?$

$\% = 20\% = .20$

$W = 30$

$P = \% W$

$P = .20(30)$

P = 6 students got an A.

Example 4: Comparing Part of a Whole to the Whole with the Percent Formula

Zoey inflated 24 balloons for decorations at the middle school dance. If Zoey inflated 15% of the balloons that are inflated for the dance, how many balloons are there in total? Solve the problem using the percent formula, and verify your answer using a visual model.

$P = 24$

$\% = 15\% = .15$

$W = ?$

$P = \% W$

$\frac{24}{.15} = \frac{.15W}{.15}$

$W = 160$ balloons

Example 5: Finding the Whole given a Part of the Whole and the Corresponding Percent

Haley is making admission tickets to the middle school dance. So far she has made 112 tickets, and her plan is to make 320 tickets. What percent of the admission tickets has Haley produced so far? Solve the problem using the percent formula, and verify your answer using a visual model.

$P = 112$

$\% = ?$

$W = 320$

$P = \% W$

$\frac{112}{320} = \frac{\% \cdot 320}{320}$

$35 = \%$

35%

Practice

* exercise 1
* exercise 2 (parts a & b)