Today is 10/3/17
Get out purple note packet and a calculator

Agenda:

Brain teaser

Percent Problems

Lesson 3: Real-Life Percentage Problems

Solving problems with percents:

1. Change % to decimal (move the decimal point __2__ places to the **left**)
2. Set up an equation: **%(as a decimal) * Whole = Part**

   OR set up a proportion: **%** = **Part**

                             100   **Whole**

1. A student earned a grade of 80% on a math test that had 20 problems. How many problems on this test did the student answer correctly? (round to the nearest whole number)

$$\frac{x}{20} = \frac{80}{100}$$ or $(.80)(20) = 16$

$$100x = 1600$$
$$x = 16$$

2. There are 36 carpenters in a crew. On a certain day, 29 were present. What percent showed up for work?

$$\frac{29}{36} = .8055 = 80.55\% = 80.6\%$$
$$81\%$$

3. A metal bar weighs 8.15 ounces. 93% of the bar is silver. How many ounces of silver are in the bar? (round to the nearest thousandth)

$$(.93)(8.15) = 7.5795$$
$$\boxed{7.580}$$

4. A woman put $580 into a savings account for one year. The rate of interest on the account was $6\frac{1}{2}$%. How much was the interest for the year in dollars and cents? (Round to the nearest cent)

$6.5\% = .065$ $(.065)(580) = \$37.70$

5. A student answered 86 problems on a test correctly and received a grade 98%. How many problems were on the test, if all the problems were worth the same number of points? (Round to the nearest whole number)

$$\frac{86}{x} = \frac{98}{100}$$

$98x = 8600$
$x = 88$

88

Check: $86/88 = .977 = 97.7\%$
$\approx 98\%$

6. Manuel found a wrecked Trans-Am that he could fix. He bought the car for 65% of the original price of $7200. What did he pay for the car? (Round to nearest dollar)

$(.65)(7200) = \$4680$

7. Pamela bought an electric drill at 85% of the regular price. She paid $32.89 for the drill. What was the regular price? (Round to the nearest cent)

Let x = reg price

$$\frac{.85x}{.85} = \frac{32.89}{.85}$$

$x = \$38.69$

8. A new watch has a subtotal of $150. If sales tax is 8%, what will the total cost for the watch?

$$(.08)(150) = \$12 \qquad 150 + 12 = \boxed{162}$$

or

$$(150)(1.08) = \boxed{162}$$

8

9. Ben earns $12,800 a year. About 15% is taken out for taxes. How much is taken out for taxes?

$$(.15)(12,800) = \$1920$$