Change a percent to a fraction	20% ⬇ 20/100 ⬇ 1/5	Rewrite the % over 100 and simplify.
Change a fraction to a decimal	1/5 1 ÷ 5 0.2	Divide the numerator by the denominator.
Change a decimal to a percent	0.25 25%	Move the decimal 2 places to the right. Add a % sign.

Unit: Rates and Percents
Student Handout 6

Warm Up

Name _____

Date _____ Pd_____

FRACTIONS, DECIMALS, AND PERCENTS

Practice making two equivalent fractions for each of the fractions below.

$\frac{6}{9}$ $\frac{8}{10}$ $\frac{5}{4}$

How do the fractions you wrote compare to the original fraction?

CONVERTING FRACTIONS TO PERCENTS

- A _____ can be written as a percent when the denominator is _____.
- If the denominator is a friendly number, you can _____ up or down or use a _____.

Convert each fraction below so that the denominator is 100.

$\frac{6}{20}$ $\frac{7}{10}$ $\frac{3}{4}$

Complete the tables below.

FRACTION	$\frac{X}{100}$	PERCENT
$\frac{3}{25}$		
$\frac{35}{50}$		
$\frac{19}{20}$		

FRACTION	$\frac{X}{100}$	PERCENT
$\frac{8}{25}$		
$\frac{60}{50}$		
$\frac{13}{20}$		

It can also be more complex. What about one-eighth?

Notes

Unit: Rates and Percents
Student Handout 7

Name _____

Date _____ Pd _____

PERCENT APPLICATION: FINDING THE PART

$\frac{\text{part}}{\text{whole}} = \frac{\%}{100}$ $\frac{\text{part}}{\text{whole}} = \frac{8}{100}$

Finding the percent of a number can be helpful in Real life.

At Paulson Middle School, 75% of the sixth grade class is making a B or higher. If there are 24 students in the sixth grade class, then how many are making a B or higher?

WHAT DO WE KNOW?

24 students - whole

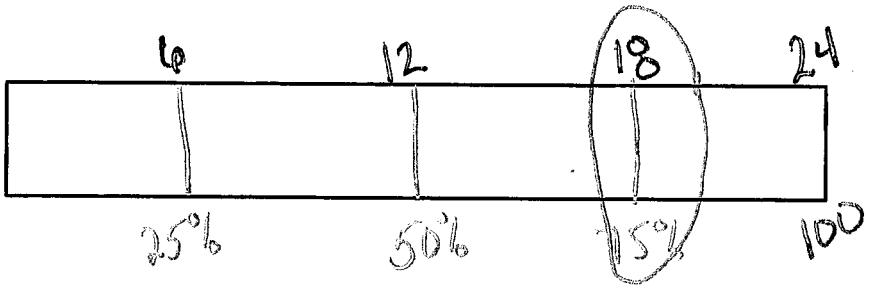
75%

WHAT DO WE NEED TO KNOW?

X - whole students B↑

ARE WE LOOKING FOR THE PART OR THE WHOLE?

WHAT DOES THE STRIP DIAGRAM LOOK LIKE?



DOES MY SOLUTION ANSWER THE QUESTION?

18 students made B or higher.

$\frac{x}{24} = \frac{75}{100}$

$100x = 75(24)$

$\frac{100x}{100} = \frac{1800}{100}$

$x = 18$

Set up a strip diagram for each of the word problems below. Do not solve.

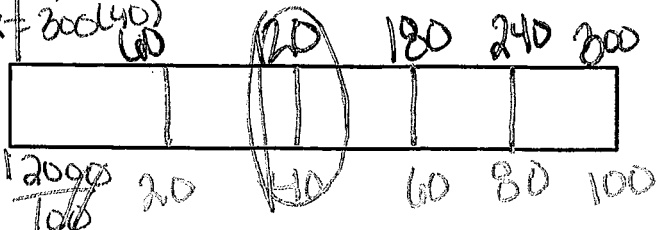
1. The campus demographics state that 40% of the students are male. If there are 300 students, then how many are male?

$\frac{x}{300} = \frac{40}{100}$

$100x = 300(40)$

$\frac{100x}{100} = \frac{12000}{100}$

$x = 120$



2. In Janet's neighborhood, 65% of the households have a landline phone. If there are 80 households in the neighborhood, then how many have a landline phone?

$\frac{x}{80} = \frac{65}{100}$

$100x = 5200$

$\frac{100x}{100} = \frac{5200}{100}$

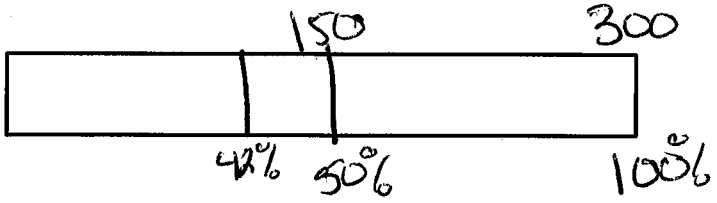
$x = 52$

Notes

Setting up a Proportion can be helpful when the problems are more complicated. A proportion is simply two Equal Fractions.

Label the strip diagram below. Then, set up a percent proportion.

The campus demographics state that 42% of the students are male. If there are 300 students, then how many are male?



$$\frac{\%}{100} = \frac{\text{PART}}{\text{WHOLE}}$$

$$\frac{x}{300} = \frac{42}{100}$$

$x = 126$ Males

3. There are 80 local little league teams. Thirty percent of them have players under the age of 7. How many teams have players under the age of 7?	4. In Seattle, WA, it is said to rain 66% of the time. Since there are 365 days in a year, approximately how many days is it expected to rain?
5. Stephen Curry plays for the Golden Gate Warriors and touts a 90% free throw shooting record. If he shot 12 free throws in a game, then approximately how many did he miss?	6. At the post office, 45% of packages ship as Priority Mail. If 160 packages are shipped today, then how many will not go as Priority Mail?

$\frac{x}{80} = \frac{30}{100}$

$100x = 80 \cdot 30$

$\frac{100x}{100} = \frac{2400}{100}$

$x = 24$ players

Summarize today's lesson: