

Name _____

Date _____

Mr. Tallman

Lesson #32 – Fractions, Decimals and Percents

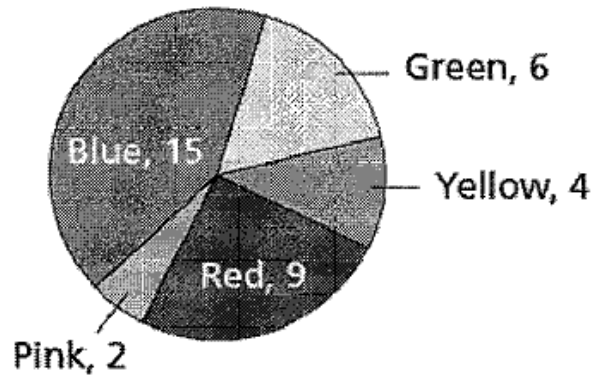
A **percent** is a ratio out of _____. The % symbol is used to represent a percent. Percents can be expressed three different ways:

Match the percents with the correct sentence clues.

A	25%	I am half of a half. 5 cubic inches of water filled in a 20 cubic inch bottle.	
B	50%	I am less than $\frac{1}{100}$. 25 out of 5,000 contestants won a prize.	
C	30%	I am the chance of birthing a boy or a girl. Flip a coin, and it will land on heads or tails.	
D	1%	I am less than a half but more than one-fourth. 15 out of 50 play drums in a band.	
E	10%	I am equal to 1. 35 question out of 35 questions were answered correctly.	
F	100%	I am more than 1. Instead of the \$1,200 expected to be raised, \$3,600 was collected for the school's fundraiser.	
G	300%	I am a tenth of a tenth. One penny is this part of one dollar.	
H	$\frac{1}{2}\%$	I am less than a fourth but more than a hundredth. \$11 out of \$110 earned is saved in the bank.	

Example 1) Using the diagram below, determine how much of the whole circle is made up by red.

- A) Red is _____ out of _____
- B) Fraction:
- C) Decimal:
- D) Percent:



Converting Percent to Decimal: (Right to Left)

- 1) Remove the % symbol
- 2) Move the decimal point two places to the left.

PeRcent → DecimaL
(Right → Left)

Example 2) Use the definition of the word *percent* to write each percent as a fraction and then as a decimal.

Percent	Fraction	Decimal
37.5%		
100%		
110%		
1%		
$\frac{1}{2}\%$		

Example 3) Convert the following percents to its decimal.

- A) 36% = _____
- B) 75% = _____
- C) 9.76% = _____

Converting Decimal to a Percent (left → right)

- Move the decimal point two places to the right and add a percent symbol (%) after the number
- Insert zeros as place holders when necessary.

Decima**L** → Pe**R**cent
(**L**eft → **R**ight)

Example 4) Convert 0.47 to a percent. _____

Try it! Convert the following decimals to its percent.

5) 0.25 = _____ 6) 0.375 = _____ 7) 0.049 = _____

Converting a Fraction to a Decimal

- To change a fraction to a decimal, divide the numerator (top) by the denominator (bottom).

Example 8) Convert $\frac{2}{5}$ to a decimal. _____

Converting a Fraction to a Percent

- To change a fraction to a percent, first change the fraction to a decimal, then change the decimal to a percent.

Example 9) Convert $\frac{5}{8}$ into a percent. _____

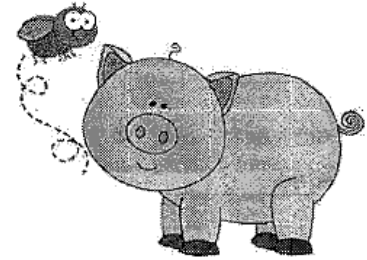
Not, You Try!

10) Complete the table below using your knowledge of fractions, decimals and percents. Show any necessary work in the space below.

Fraction (in simplest form)	Decimal	Percent
		60%
	0.15	
$\frac{1}{20}$		

11) The table below shows the results of a survey which asked students to vote for their favorite animal.

Animal	Number of Students
fox	10
pig	15
camel	5



A) How many students were surveyed? _____

B) Express the total number of students who voted for a fox as a fraction. _____

C) Express the number of students who voted for a pig as a decimal. _____

D) Express the number of students who voted for a camel as a percent. _____

12) Convert the following percents into decimals.

a. 90%

b. 0.9%

c. 900%

d. $\frac{9}{10}\%$

13) Convert the following percents into fractions.

a. 90%

b. 0.9%

c. 900%

d. $\frac{9}{10}\%$

14) Benjamin believes that $\frac{1}{2}\%$ is equivalent to 50%. Is he correct? Why or why not?