% PERCENT STUDY GUIDE %

PERCENT

TO DECIMAL
DIVIDE BY 100
(SHORTCUT: Move the decimal two places to the **LEFT**.)

$14\% = \frac{14}{100} = 0.14$

TO FRACTION
Write the percent over 100 and simplify the fraction.

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

DECIMAL

TO PERCENT
MULTIPLY BY 100
(SHORTCUT: Move the decimal two places to the **RIGHT**.)

$0.28 = 0.28(100) = 28\%$

TO FRACTION
READ the number (REMEMBER: only the number after the decimal is written as a fraction), and then simplify the fraction.

$1.6 = 1\frac{6}{10} = 1\frac{3}{5}$

FRACTION

TO PERCENT
- Divide numerator by denominator, and move the decimal two places to the RIGHT

$\frac{2}{5} = 2 \div 5 = 0.4 = 40\%$

- Set up a percent proportion & solve.

$\frac{2}{5} = \frac{x}{100}$ $\quad 5x = 200$ $\quad x = 40\%$

TO DECIMAL
Divide the numerator by the denominator.

$\frac{3}{5} = 3 \div 5 = 0.6$

PERCENT PROPORTION

$$\frac{is}{of} = \frac{\%}{100}$$

28 is 40% of what number?

$$\frac{28}{x} = \frac{40}{100}$$
$$40x = 2800$$
$$x = 70$$

PERCENT WORD PROBLEMS

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

There are 44 students in Mrs. Gizzi's math classes of which 25% received an A on the last test. How many students got an A?

$$\frac{x}{44} = \frac{25}{100}$$
$$100x = 1100$$
$$x = 11$$

PERCENTS WITH $:
MULTIPLY AMOUNT BY % (written as a decimal).

A video game store has a 20% off sale on all games. How much would you save on a game that originally cost $32?

32
x .2
6.4 → $6.40

TO CALCULATE FINAL COST: **DISCOUNT → *DEDUCT*** **TAX & TIP → *ADD***