

## APPLICATIONS of PERCENTS

By following a structured format, we can solve any percentage problem:

The formula for percentage problems is:

$$\begin{array}{ccc} \left( \text{A percent} \right) & \text{of} & \left( \text{a total} \right) & \text{is} & \left( \text{a portion} \right) \\ & & \downarrow & & \downarrow \\ \left( \quad \right) & \cdot & \left( \quad \right) & = & \left( \quad \right) \end{array}$$

↳ EXAMPLE 1:

A basketball player makes 72 out of 90 free throws. What percent is this?

↳

EXAMPLE 2:

How much sodium is in a 60ml  
bottle that is marked 75%  
sodium?

Note: Since there is only 60ml in the  
bottle, the amount of sodium  
should be **LESS** than 60 ml.

↳

EXAMPLE 3:

If 23% of the students at a  
certain college are math majors  
and there are 276 math  
majors, what is the total  
number of students?

→

EXAMPLE 4:

If 50 students enrolled in a music class but only 44 students completed it, what percent of students completed the course?

## APPLICATIONS OF PERCENTS practice problems

Solve each problem. Round to the nearest tenths place.

1. At a certain school there are 396 males out of 723 students. What percent is this?
2. How much HCl (hydrochloric acid) is in a 70 ml bottle marked 34% HCl?
3. If 46% of a solution is water and there is 90 ml of water, how many ml is the total solution?