

## Percents

### What do I have to do in order to solve a percent problem?

First of all, identify the components of the problem:

**Base:** The whole quantity.

**Part:** Is a simply a portion of the base.

**Rate:** Is the percent.

You will know two out the three components. The goal is to calculate the third component.

If you are open to suggestions, I would recommend using this formula:  $\frac{P}{B} = \frac{R}{100}$

It works for *all* percent problems, and with just a bit of practice it is easy to use.

**The following examples show you how to set-up the formula. That will be our focus for now. Subsequent tip sheets will show you how to *solve* them.**

#### Example

Mary is considering purchasing a sweater that has a retail price of \$30. It is on sale for 25% off. How much can she save by taking advantage of the discount?

**Base:** \$30 (retail price of sweater)

**Part:** ? (the amount she will save)

**Rate:** 25% (discount rate)

Plug-in these values into the formula:  $\frac{P}{B} = \frac{R}{100}$

Here is the formula after plugging in the known values:  $\frac{P}{30} = \frac{25}{100}$

#### Example

Ralph took a driver's license test. He got 30 out of 35 correct. What is his score expressed as a percent?

**Base:** 35 (total number of question on the test)

**Part:** 30 (the number of questions Ralph got right)

**Rate:** ?% (score expressed as a percent)

Here is the formula after plugging in the known values:  $\frac{30}{35} = \frac{R}{100}$

#### Example

On a day when it snowed heavily, 33 employees, who are 55% of the total workforce of a small factory, made it to work on-time. What is the size of the total workforce?

**Base:** ? (we must determine the size of the total workforce)

**Part:** 33 (we know what portion of the workforce made it on-time)

**Rate:** 55% (this percent of the workforce made it to work on-time)

Here is the formula after plugging in the known values:  $\frac{33}{?} = \frac{55}{100}$