

General Topics

How do I solve word problems?

To solve word problems you need to answer at least three questions:

- 1.) What numbers are needed to answer the question?
- 2.) What mathematical operation(s) are needed to arrive at an answer?
- 3.) Does your answer make sense?

1.) What numbers are needed to answer the question?

We ask this question because in real-life you are often given more information than is necessary.

Let's look at a couple of problems and practice selecting important information and ignoring irrelevant things.

Example

On Oct. 1, Jim, a 7-year employee of ARTCO, will get a raise. He used to make \$15.65 per hour but will now earn \$0.18 more per hour. How much will he earn per hour after the raise?

The fact that the raise will occur on Oct. 1 and Jim's term of employment (7 yrs) has nothing to do with determining his new hourly pay rate. The numbers you really need are \$15.65 and \$0.18.

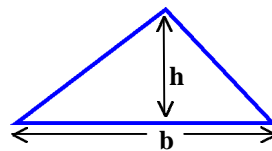
Example

A 15" long, 3/4"-diameter pipe that weighs 1.1 lbs. is to be welded to a 24" by 30" piece of 1/4" thick mild steel that weighs 3.5 lbs. What will be the total weight when the two pieces are welded together?

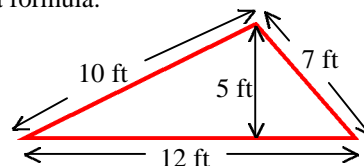
Since we are interested only in the total weight of the pipe and the plate, we really don't care about the length and diameter of the pipe or the dimensions of the plate.

Example:

The formula for the area of a triangle is $A = 0.5bh$



If you want to calculate the area of a triangle like the one shown below, you are going to have to identify and use only the numbers that are required of the area formula.



Using the diagram furnished with the formula $A = 0.5bh$ you can see the numbers needed are $b = 12$, and $h = 5$. The other numbers represent extra information that you *don't need*.