

The Five Steps

Physical Science and Technology

Solving word problems can be tricky sometimes. Using the Five Steps can help you solve problems – particularly if there are a lot of numbers in the problem. When using the Five Steps, make sure you follow each step to the best of your ability, show all your work, and write down the letters that identify each step so you don't lose track of where you are. Also make sure to consistently write variable names and always write units!

Here are the Five Steps:

1. Write down the values (variables) that are given in the problem. Use the If You Know Tables in your notes to match the units in the problem to the variables.
2. Write down the variable that the question is asking you to find. Use the If You Know Tables in your notes to help determine which variable the question is looking for.
3. Write down the formula that you will use to solve the problem. Use the If You Know Tables in your notes.
4. Substitute variables and solve the problem.
5. Write down the answer – WITH UNITS!

Here is an example:

Question:

A turtle is turtling down the street with a velocity of 4.1 m/s. If it turtles for 2,221 seconds, how many meters does it go?

Answer:

1. $v = 4.1 \text{ m/s}$; $t = 2,221 \text{ s}$
2. d
3. $d = v * t$
4. $d = 4.1 \text{ m/s} * 2,221 \text{ s}$
 $d = 9,106.1 \text{ m}$
5. 9,106.1 m