

The Full Wolgemuthian Problem Solving Method

Step 1: List Initial Conditions

For example, if the problem is: "The velocity of a moving object is 12 meters per second, and it travels a certain distance in 7.0 seconds. How far does it travel in this time if it isn't accelerating?" You would list whichever conditions are already known.

Initial conditions:

$V=12$ meters/second

$t=7.0$ seconds

Step 2: Identify a Corresponding Formula

Using the problem from before, ("The velocity of a moving object is 12 meters per second, and it travels a certain distance in 7.0 seconds. How far does it travel in this time if it isn't accelerating?") and our initial conditions, a corresponding formula can be easily identified. Since we know velocity and time, and we are solving for distance, we can use the formula;

$Velocity=distance/time$

OR

$V=d/t$

Step 3: Isolate the Unknown Variable and Substitute Known Values

From step 2, we know that our formula is $V=d/t$. As we are solving for the variable d , for distance, we can isolate it as follows:

$V=d/t$

$$t(V) = t(d/t)$$

$$Vt = d$$

Now that we have isolated the unknown variable d , we can plug in our known values, which were listed in step 1.

$$(12\text{m/s})(7.0\text{s}) = d$$

Step 4: Solve for the Unknown Variable

With the known values plugged into the equation, we can solve for the unknown variable.

$$(12\text{m/s})(7.0\text{s}) = d$$

All we have to do is multiply the two numbers together and we will have an answer.

$$(12\text{m/s})(7.0\text{s}) = 84\text{m}$$

Therefore:

$$d = 84 \text{ meters}$$

This solving method will be used for EVERY problem in this class, so don't forget it!