Follow the 4 steps of Problem Solving to get great results !

1. Write out the given information.

2. Write down the correct formula

3. Substitute the given information into the formula.

4. Solve

Remember: You get partial credit for showing your steps

It is unusual for there to be unnecessary numbers in High School Science Problems.

All HS Math Problems in Science work in either one of two ways.

FIRST TYPE: You will be given information that will leave out only the variable that needs to be solved for. These are the easiest problems.

Example: What is the mass of 12 mL of a liquid that has a density of 3 g / mL ?

**STEPS:**

1.) m = ? D = 3 V = 12 2.) D = m / V

3.) 3 = m / 12 4.) mass = 36 grams.

SECOND TYPE: There will seem to be a variable missing that you will need. You will have other numbers in the problem that will lead you to that value. Then you can use that to solve for the answer.

Example: What is the mass of a cube that has a density of 6 g / mL and is 2 cm. on a side ?

**STEPS:**

1.) m = ? D = 6 Side = 2

2.) D = m / V (This is the only formula that we have that has density)

3.) 6 = mass / Volume We don’t have the volume but we know the length of the side of a cube which will tell us a volume. We must solve for this first.

Side cubed = Volume 🡪 23 = 8

Now we have a volume so step 3 becomes 6 = mass / 8

4.) mass = 48 grams.

Don’t forget to highlight your answer by circling it !!