

Step 1: Read the problem. Determine the given information and what the question is asking for.

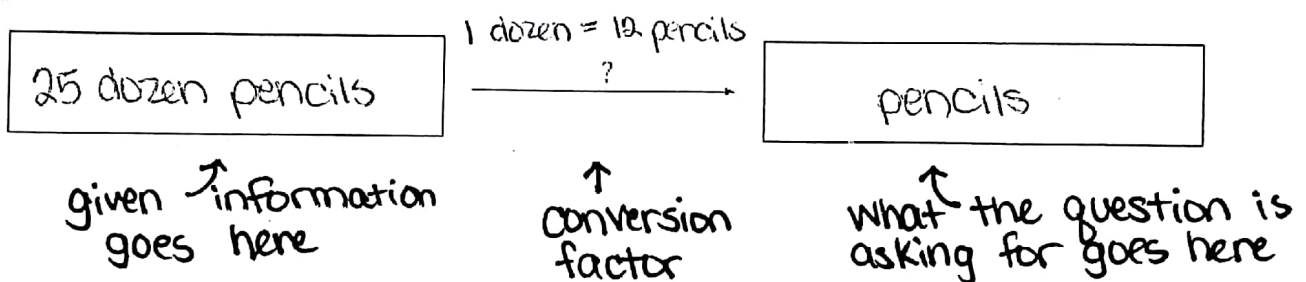
PROBLEM #1 - There are 25 dozen pencils in the pencil case. How many pencils do you have in total?

given information

what the question is asking for

Step 2: Complete your Roadmap. What conversion factor can we use?

Roadmap to success: "THINK: What can I use to move from dozen to individual pencils? What is your conversion factor?"



Step 3: Use the information to fill in the T-chart.

- "Given Information" goes in the top left.
- "What the question is asking for" goes in the top right.
- Put the same unit as the "given information" in the bottom right.

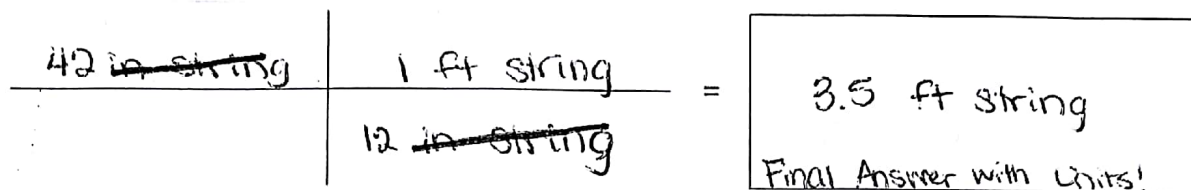
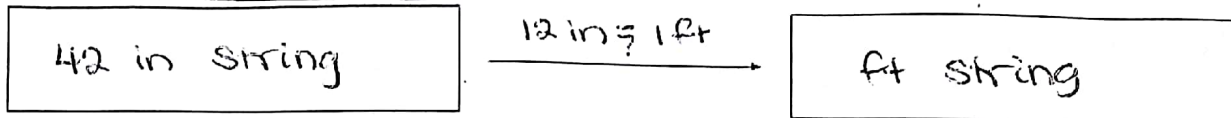
Do the DISCO! "THINK: The units you want to cancel out must go diagonal from each other."

a) 25 dozen pencils	b) 12 pencils	=	300 pencils
	c) 1 dozen pencils		

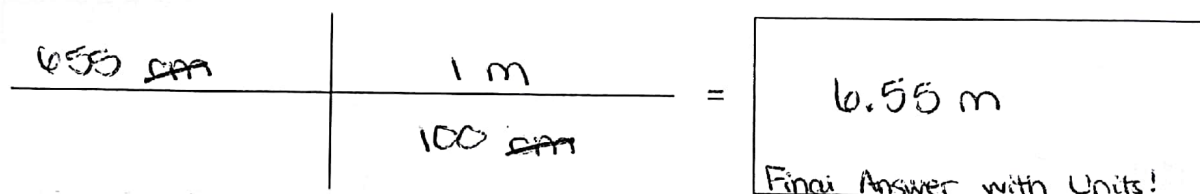
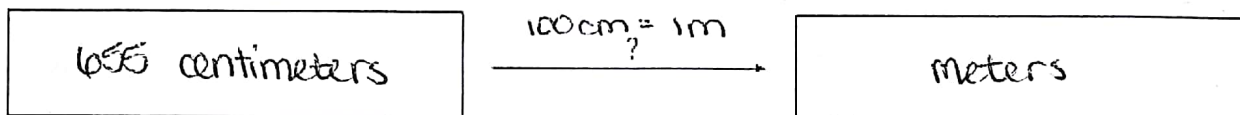
Final Answer (include units and substance)

Step 4: Fill in the numbers of the conversion factor and solve by multiplying across the top & bottom, then divide (see above). Be sure to cancel units!

PROBLEM #2 - You have 42 inches of string, but you need to know how many feet of string you have. (Remember, you know there are 12 inches in 1 foot)



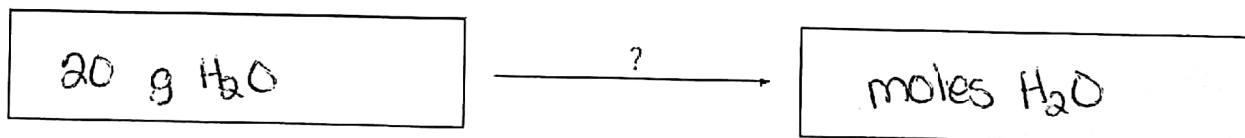
PROBLEM #3 - A carpenter measures a window to have a length of 655 centimeters. How many meters is the window? (There are 100 centimeters in 1 meter)



Now with a chemistry problem...

PROBLEM #4 - You have 20 grams of water and you want to know how many moles of water that is.

STEP 1: Roadmap to success: "THINK: What can I use to move from grams to moles? What is your conversion factor?"

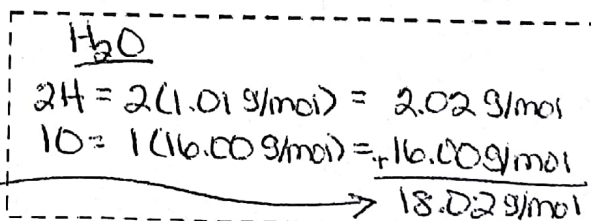


STEP 2: The first step is to set up our t-chart. Remember to write the given information in the upper left hand box. **DO THE DISCO!!!!** "THINK: The units you want to cancel out must go diagonal from each other"

STEP 2: Calculate the molar mass of water:

The molar mass of water is (include your units!):

This means 18.02g=1mole



The molar mass is our conversion factor; this is what goes in the second box on our t-chart. This is so that the units cancel.

STEP 3: Fill in the rest of the t-chart and solve. Cross off units as you go through to get the units of your final answer.

