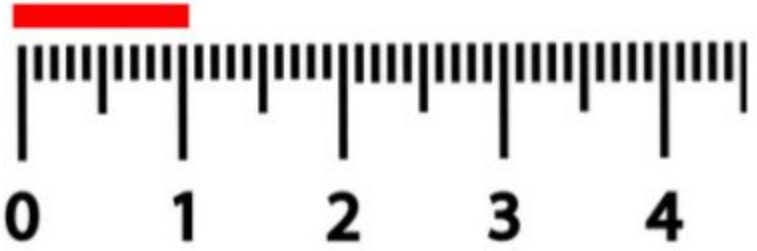

METRIC MANIA!
LESSON 1: LENGTH

MEASURING LENGTH

How many millimeters are in 1 centimeter?

1 centimeter = 10 millimeters



What is the length of the line in centimeters? 3.8 cm

What is the length of the line in millimeters? 38 mm

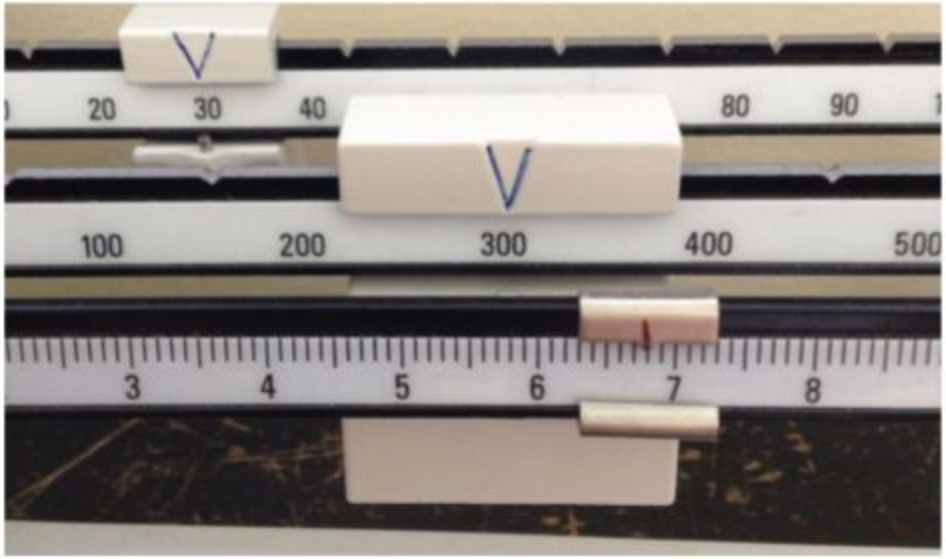
What is the length of the line to the nearest centimeter? 4 cm

HINT: Round to the nearest centimeter – no decimals.

METRIC MANIA!

LESSON 2: MASS

MEASURING MASS



We will be using **triple-beam balances** to find the mass of various objects.

The objects are placed on the scale and then you move the weights on the beams until you get the lines on the right-side of the scale to match up.

Once you have balanced the scale, you add the amounts on each beam to find the total mass.

What would be the mass measured in this photo?

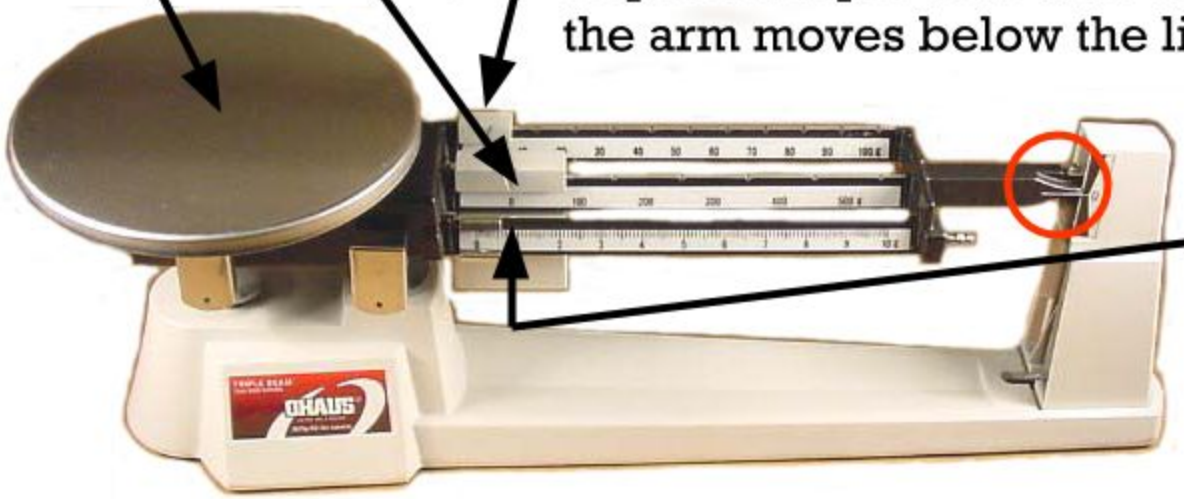
30 + 300 + 6.8 = 336.8 g

MEASURING MASS

1st – Place a solid object on the scale.

2nd – Slide the large weight to the right until the arm drops below the line. Move the rider back one groove. Make sure it "locks" into place.

3rd – Repeat this process with the top weight. When the arm moves below the line, back it up one groove.



4th – Slide the small weight on the front beam until the lines match up.

5th – Add the amounts on each beam to find the total mass to the nearest tenth of a gram.

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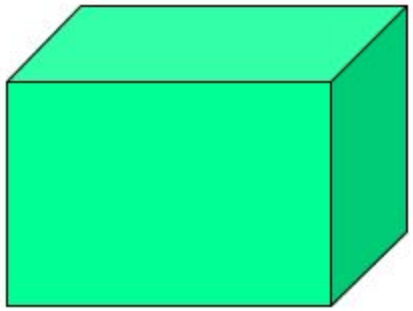
LESSON 3: VOLUME

MEASURING VOLUME



We can measure the volume of a regular object using the formula -

V = L x W x H

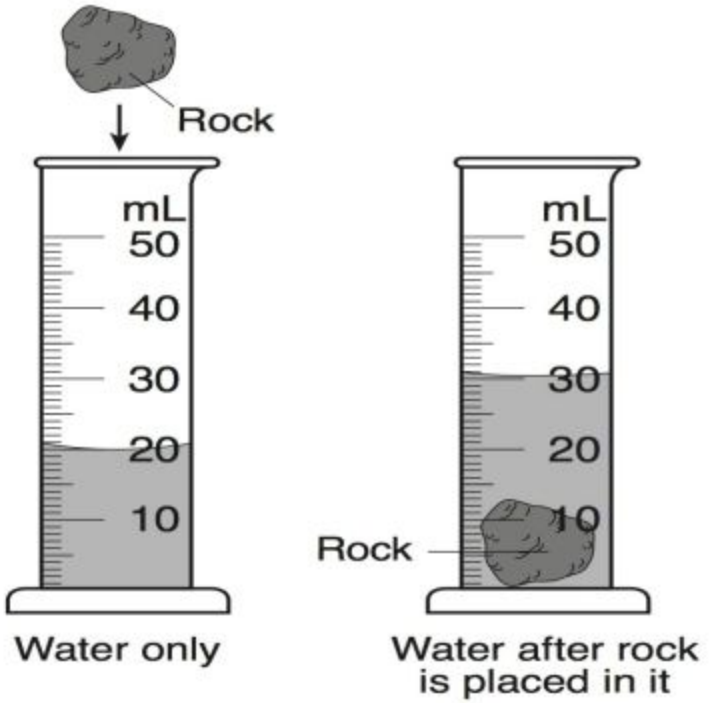
10 x 8 x 9 = 720 cm^3

We can measure the volume of irregular object using **water displacement**.

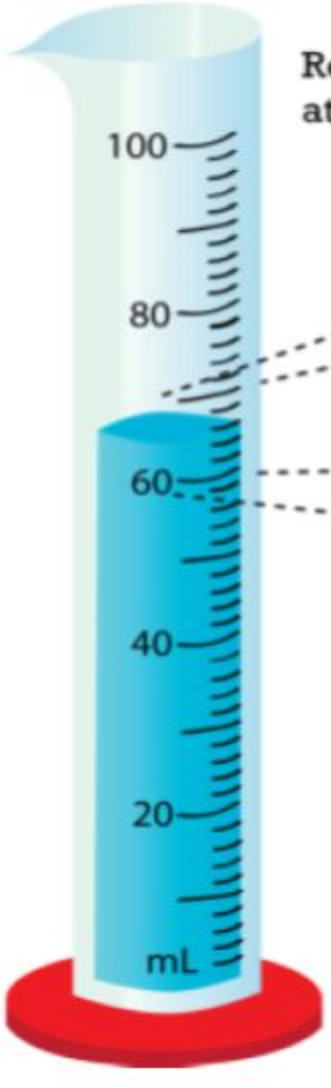
Amount of H_2O with object = 30

About of H_2O without object = 20

Difference = Volume = 10 cm^3



MEASURING VOLUME



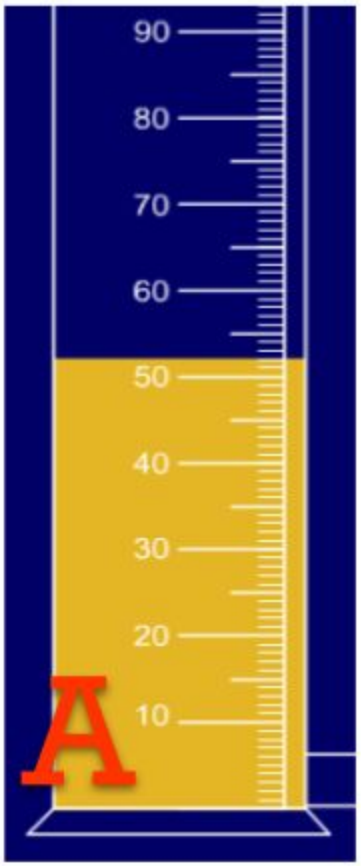
We will be using **graduated cylinders** to find the volume of liquids and other objects.

Read the measurement based on the bottom of the **meniscus** or curve. When using a real cylinder, make sure you are eye-level with the level of the water.

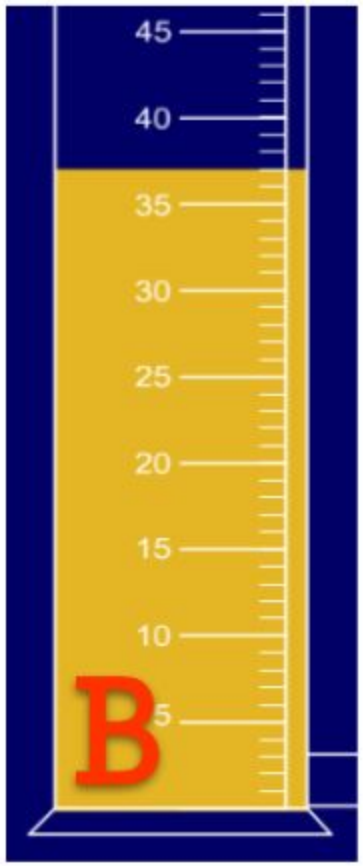
What is the volume of water in the cylinder? 67 mL

MEASURING VOLUME

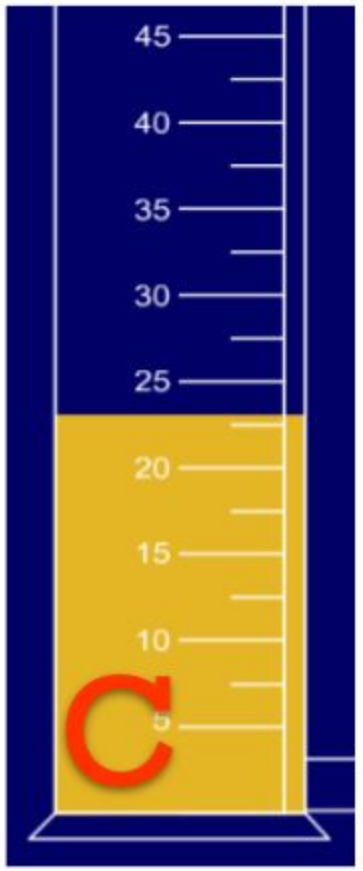
Q: What is the volume of water in each cylinder?



52 mL



37 mL



23 mL