UNITED ARAB EMIRATES
MINISTRY OF EDUCATION

الإمارات العربية المتحدة
وزارة التربية والتعليم

Khalifa City A School - Cycle 1

مدرسة مدينة خليفة أ / حلقة أولى

SCIENCE

CHAPTER 6 -MATTER AND ITS CHANGES

LESSON 2– MEASUREMENT

PART -1



Created by- Nisha Tanwar

HOW DO WE MEASURE MATTER?

- To measure, we use standard units.
- **STANDARD UNIT**-It is a measurement on which all people agree.

METRIC SYSTEM

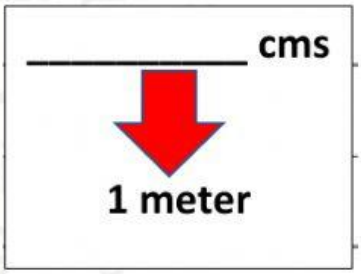
To measure smaller or larger quantities, we use units derived from the metric units.



Metric Units	Amount	Estimated Length
1 centimeter	$\frac{1}{100}$ of a meter	the width of your thumbnail
1 decimeter	10 cm $\frac{1}{10}$ of a meter	the length of a crayon
1 meter	10 dm 100 cm	the length of a baseball bat
1 kilometer	1,000 m 100,000 cm	the distance you walk in 10 to 15 minutes

Read a Table

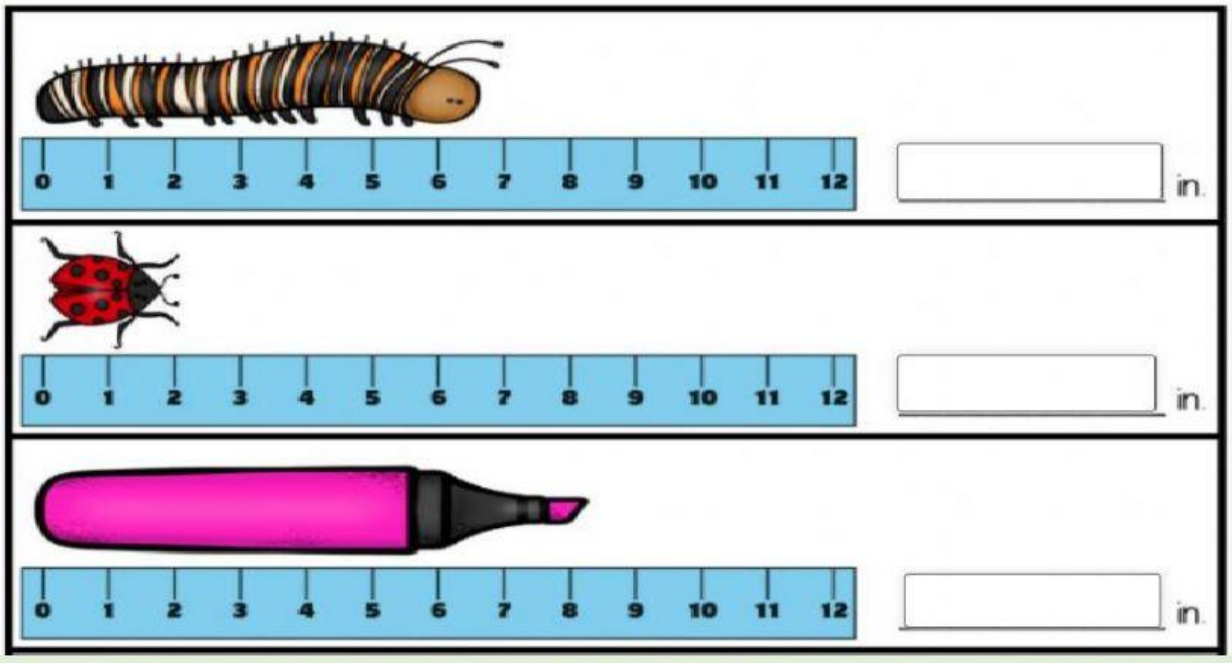
How many centimeters are in a meter?



Length and Width

An object's length is the number of units that fit from one end to the other. *Width* is the number of units that fit across.

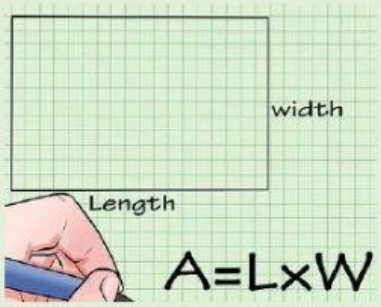
Measure to the nearest inch!



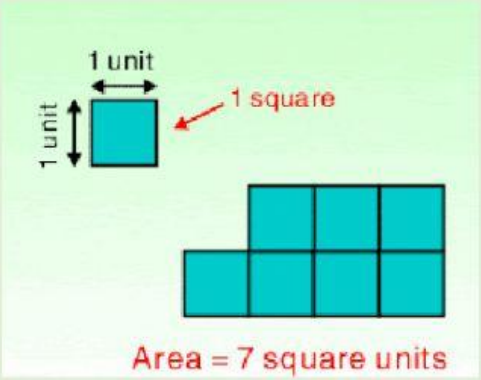
AREA

There are 2 ways to calculate area-

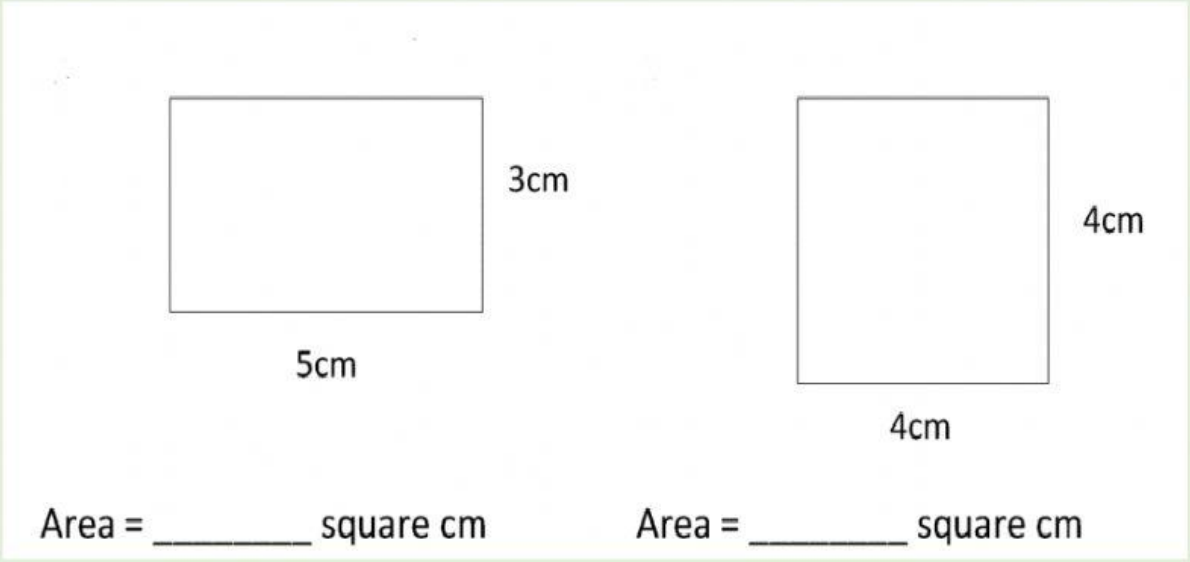
1. **Using formula – Multiply length x width**



2. **Counting unit squares- Divide the shape into smaller square. Count the number of unit squares. You might need to estimate some parts of the shapes.**



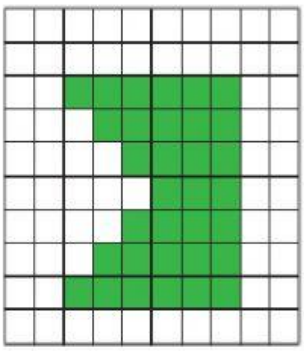
PRACTICE QUESTIONS:



Find the area of each shape.

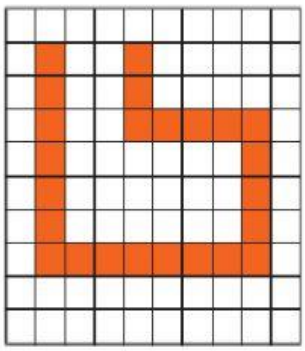
= 1 square unit

1)



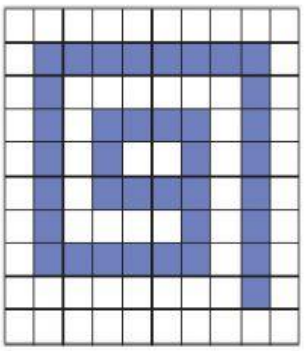
Area = ... square units

2)



Area = ... square units

3)



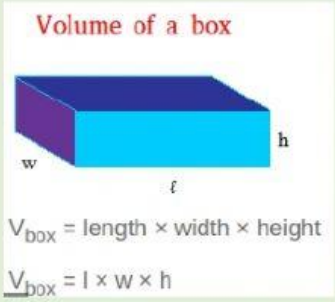
Area = ... square units

VOLUME

There are 3 ways to calculate volume-

1. **Using formula for rectangular shape–**

   Multiply length x width x height



2. **For liquids-**

   Use measuring cup, graduated cylinder, beaker

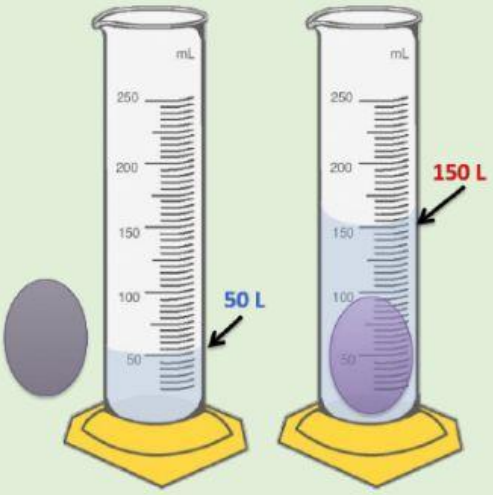


3. For irregular shape-

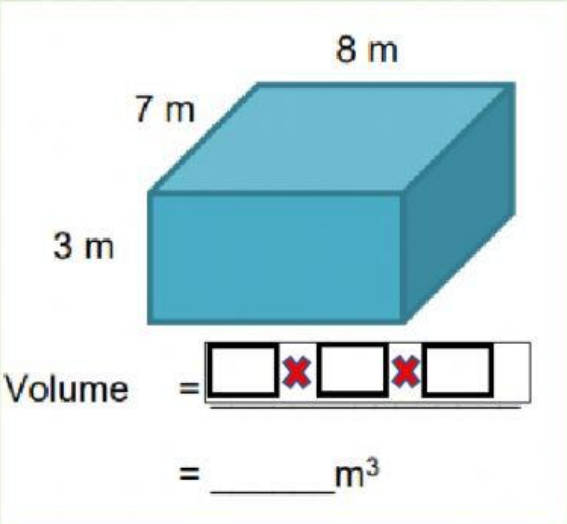
First, measure the amount of water in a container. Then, submerge the entire object below the water. Subtract the original water level from the new water level. The result is the volume of the object.

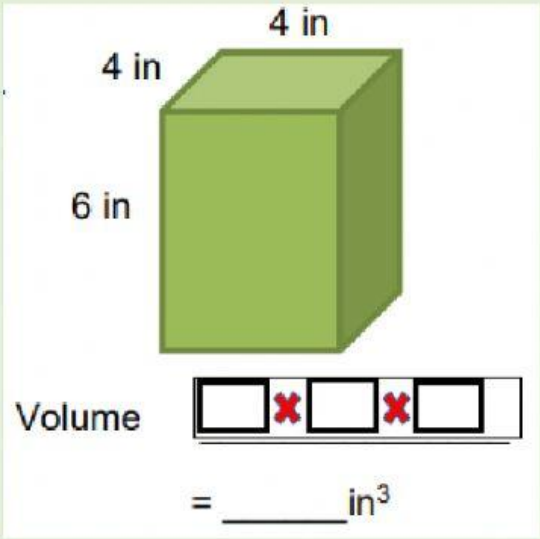
Finding Volume:

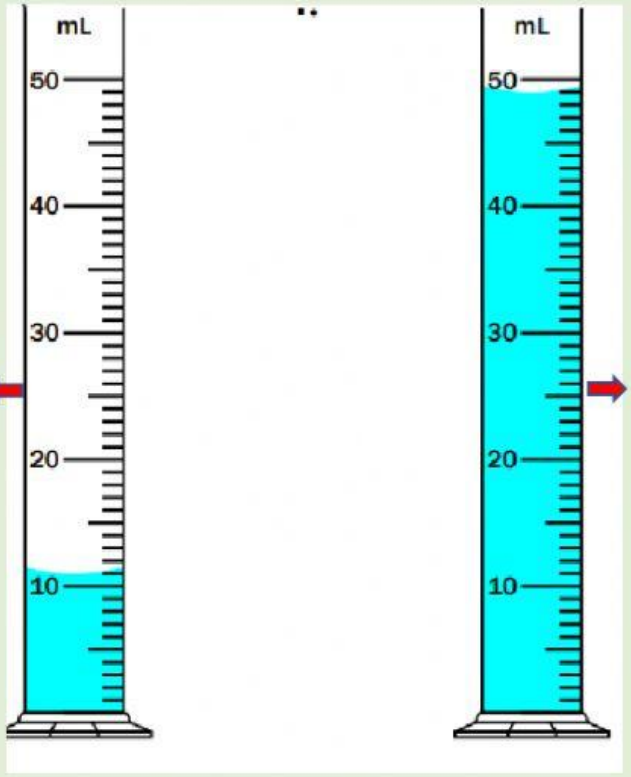
150 L – 50 L = 100 L



PRACTICE QUESTIONS:

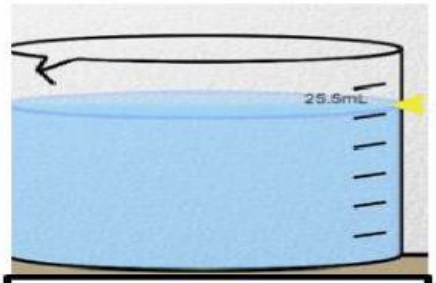




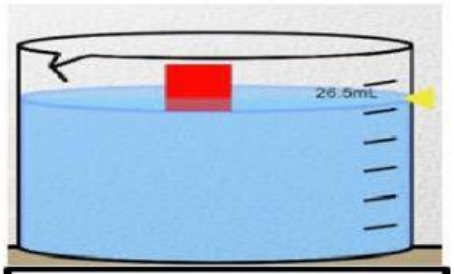


_____ mL

_____ mL

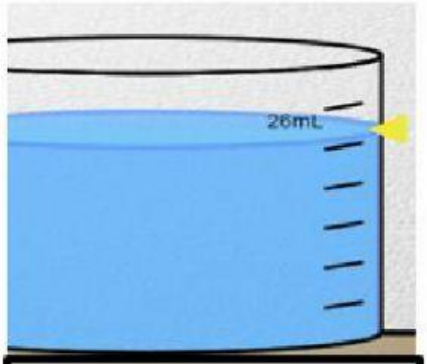


BEFORE: _____ mL



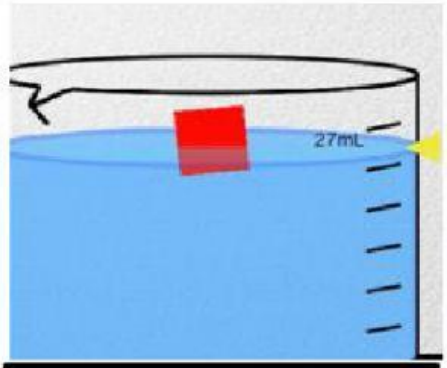
AFTER: _____ mL

VOLUME OF THE OBJECT: _____ mL



BEFORE:

_____ mL



AFTER:

_____ mL

VOLUME OF THE OBJECT:

_____ mL

QUESTIONS FROM BOOK

1. **Vocabulary.** The number of unit squares that cover a surface describes its

_____

2. Which unit would be used to measure the length of your desk?

A meters
B grams
C centimeters
D g/cm^3

3. How can you measure the volume of the gas inside this balloon?



A Submerge the balloon in water. Subtract the original water level from the new water level.
B Measure the length and width of the balloon. Multiply the two numbers.
C Empty the contents of the balloon into a beaker. Record the volume.
D The volume cannot be measured.

4

Which of the following is a metric unit of measurement?

A meter
B mass
C weight
D color