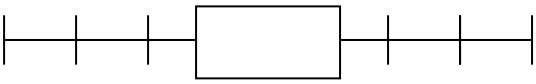
**Metrics 2 Volume**

Name _____Period_____

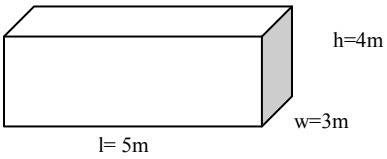


Fill in Hop Chart

**Rectangular solids**- Found by multiplying L x W x H (length x width x height)

Multiplying units gives **units$^3$**

Preferred units are **cm$^3$**




Find the volume=

5 x 4 x 3 =60

m x m x m = m$^3$

60m$^3$

**Converting Volume Measurements** on the "Hop" chart.

Find the normal hops and direction between units and **then multiply** by the exponent. The exponent for volume measurements is **always 3**!

Convert 60m$^3$ = _____ cm$^3$

On Hop Chart:

Meters (m) to Centimeters (cm) is **2** hops to the **right.**

***Multiply*** **2** by the exponent **3** to get **6 hops to the right!**

**60.>>>>>> = 60,000,000 cm$^3$**

This actually means that if the box above was really 60m$^3$ you could fit 60 million 1cm$^3$ boxes within it! WOW!

**Volume**- defined by the *amount of space* taken up by a solid object OR liquid OR the amount of space inside something (capacity).

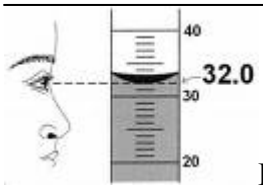
**Liquid Volume**

Found using a graduated cylinder

Read the **"meniscus"**

Units for Liquid volume= **Liters**

Preferred units = **mL**




**Read Meniscus for liquid volume in a graduated cylinder. The bottom of the curved line!**

**32 mL**

**Capacity**

Dimensions of box= 1cm x 1 cm x 1cm

Therefore volume = **1 cm$^3$.** If this was an empty box, the liquid that could fit into it (**Capacity**) would be **1mL,** therefore the solid volume of **cm$^3$** is ***always equal*** to the liquid volume in **mL.**

**1cm$^3$= 1mL**

Practice

Convert

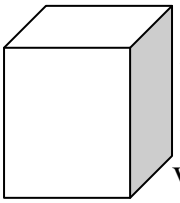
24Km$^3$ = _____ hm$^3$

33mm$^3$ = _____cm$^3$

.03456Km$^3$ = _____cm$^3$

67cm$^3$= _____mL

Create your own Rectangular Volume problem. Use meters for length, width and height. Convert the volume to cm$^3$. Then explain how much water could fit into the box!



l = ____m

w = _____m

h= _____m

V=_____

V=_____cm$^3$

V of water _____ that fits in box.