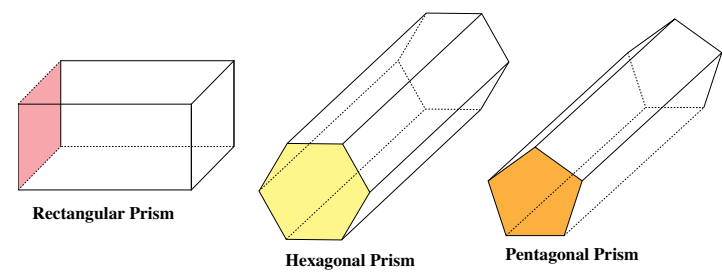


# CONNECTIONS ACROSS THE CURRICULUM: Measurement

## MATHEMATICS

**Volume of prisms =**  
base area x length



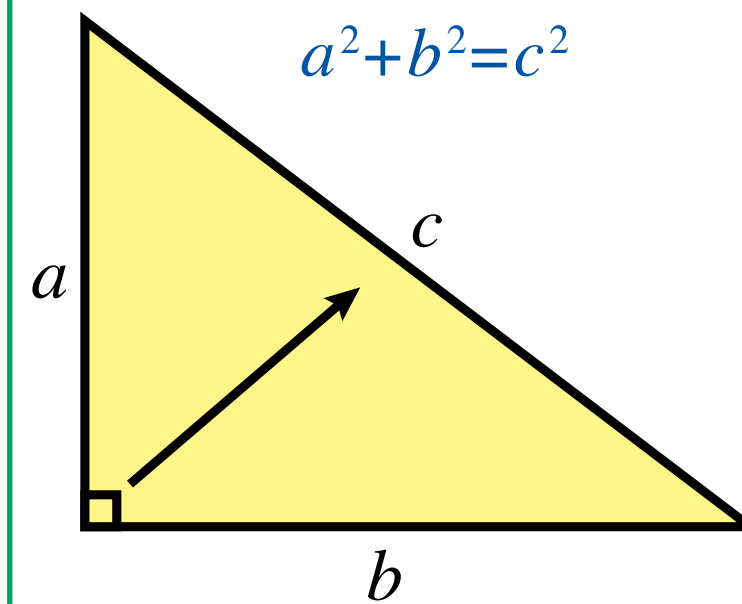
**Volume of cone =**  $\frac{\pi r^2 h}{3}$

**Volume of square-based pyramid =**  $\frac{lwh}{3}$

**Volume of sphere =**  $\frac{4}{3} \pi r^3$

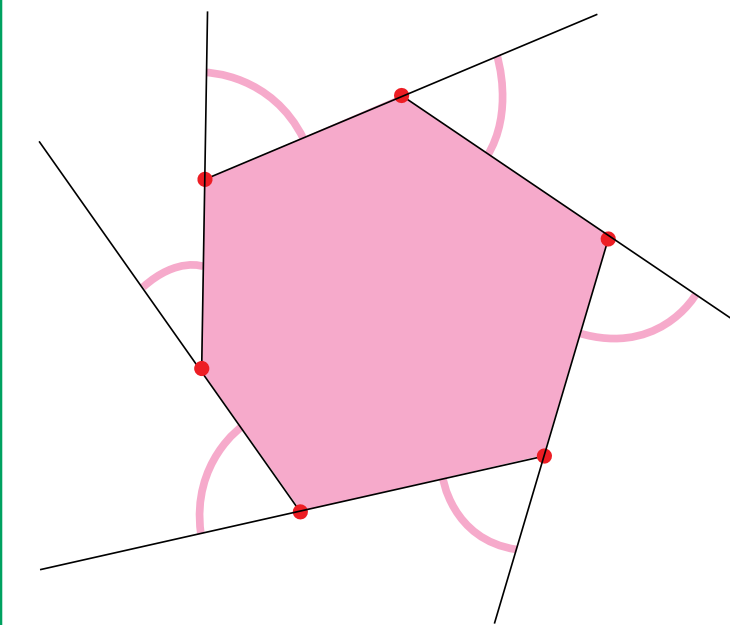
### Pythagorean Theorem

$$a^2 + b^2 = c^2$$

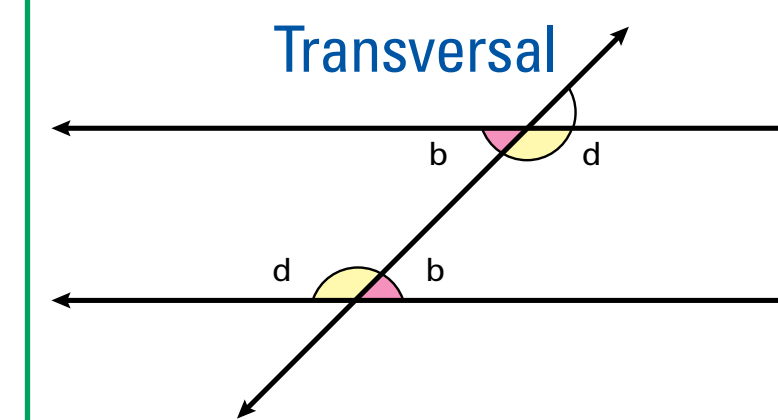


Which side is the hypotenuse?  
The right angle points to the hypotenuse.  
It is the side labelled "c".

The sum of the measure of the exterior angles of any polygon is 360°

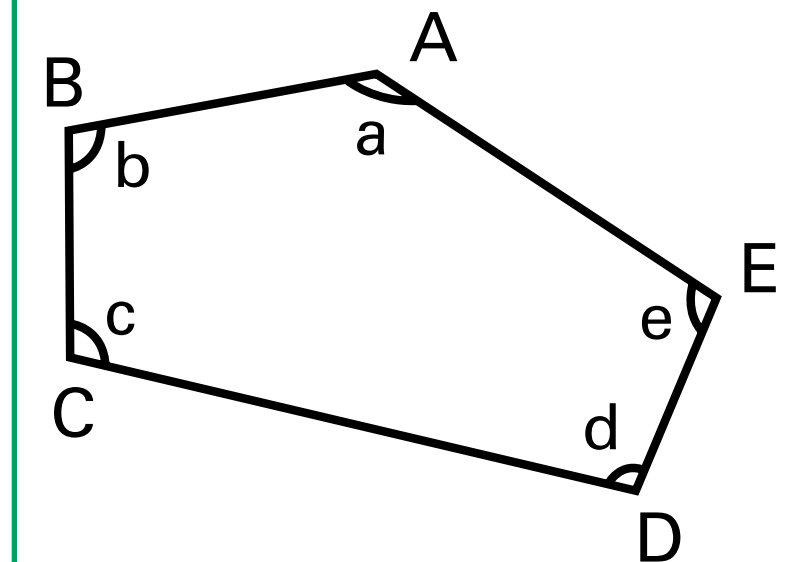


### Parallel Lines



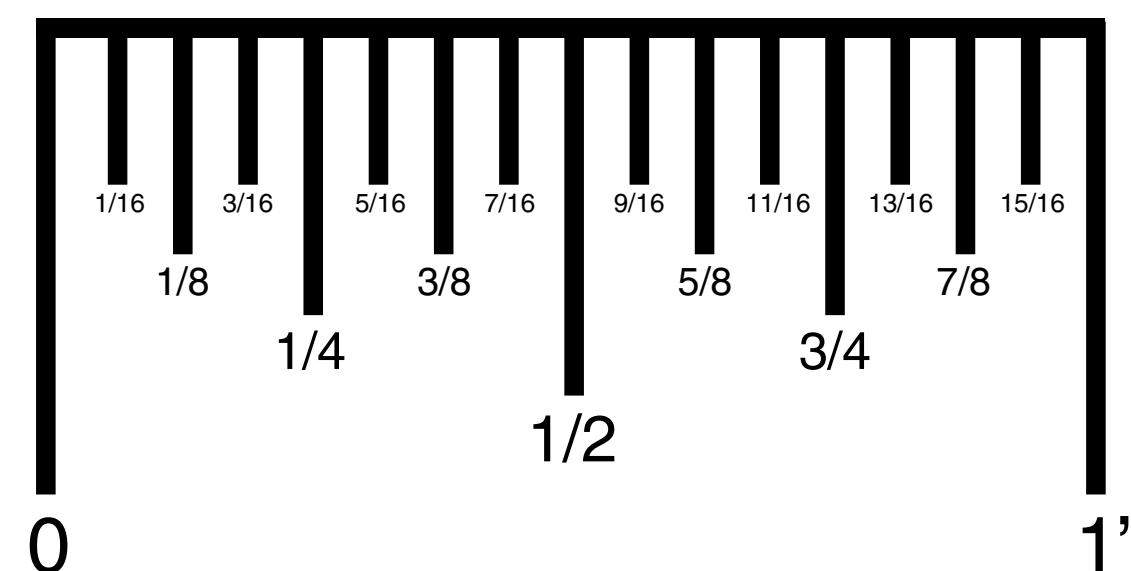
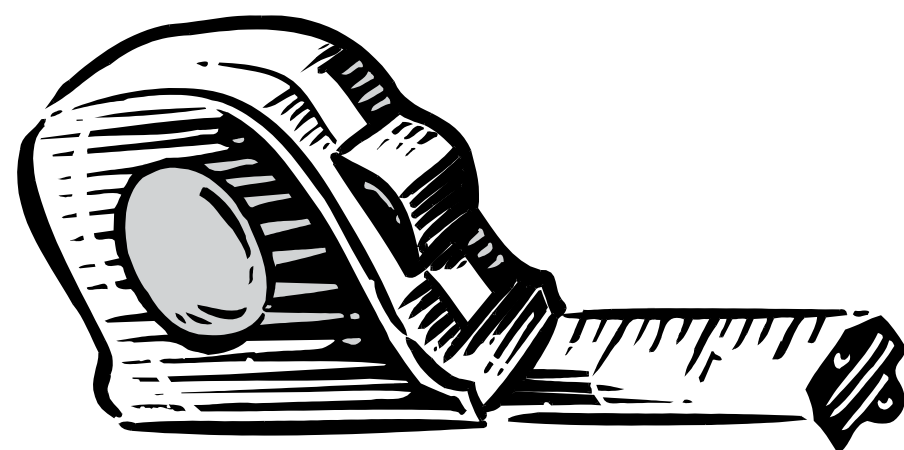
$\angle b + \angle d = 180^\circ$   
 $\angle b = \angle c$

The sum of the measures of the interior angles of a polygon is  $(n-2) \times 180^\circ$   
n=number of sides of the polygon.



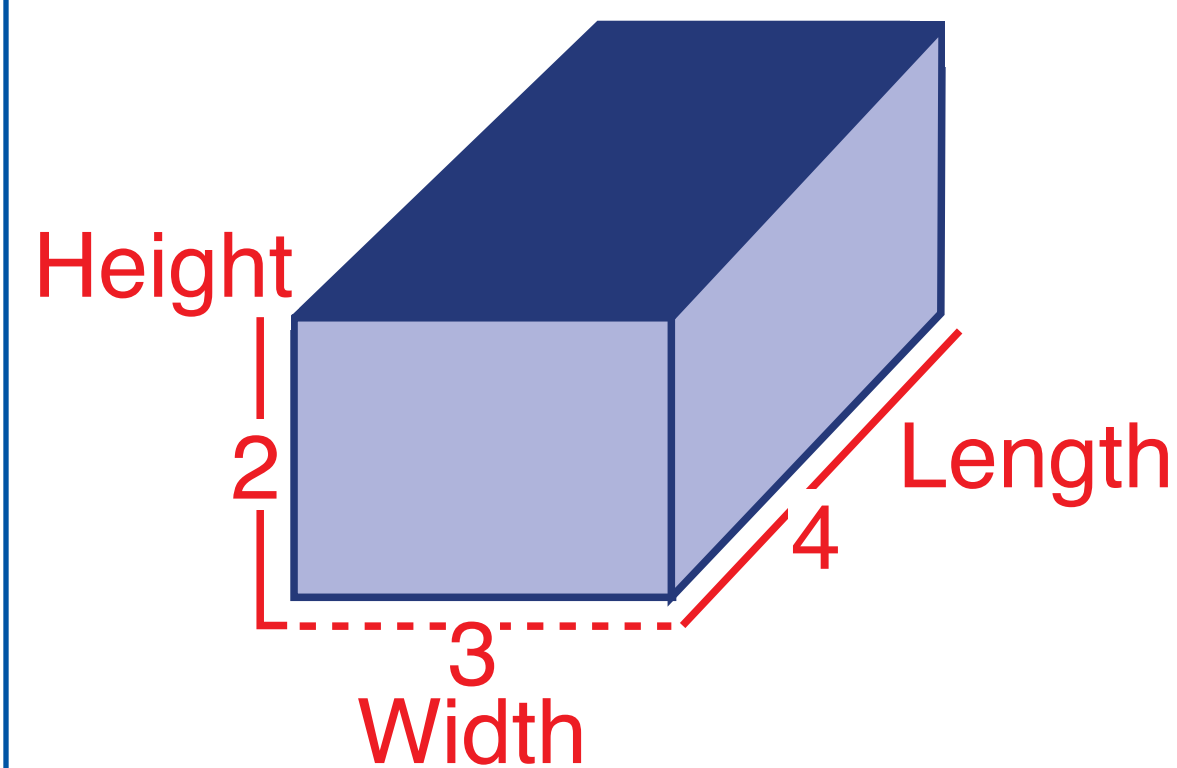
## TECHNOLOGICAL STUDIES

### Imperial Measurement

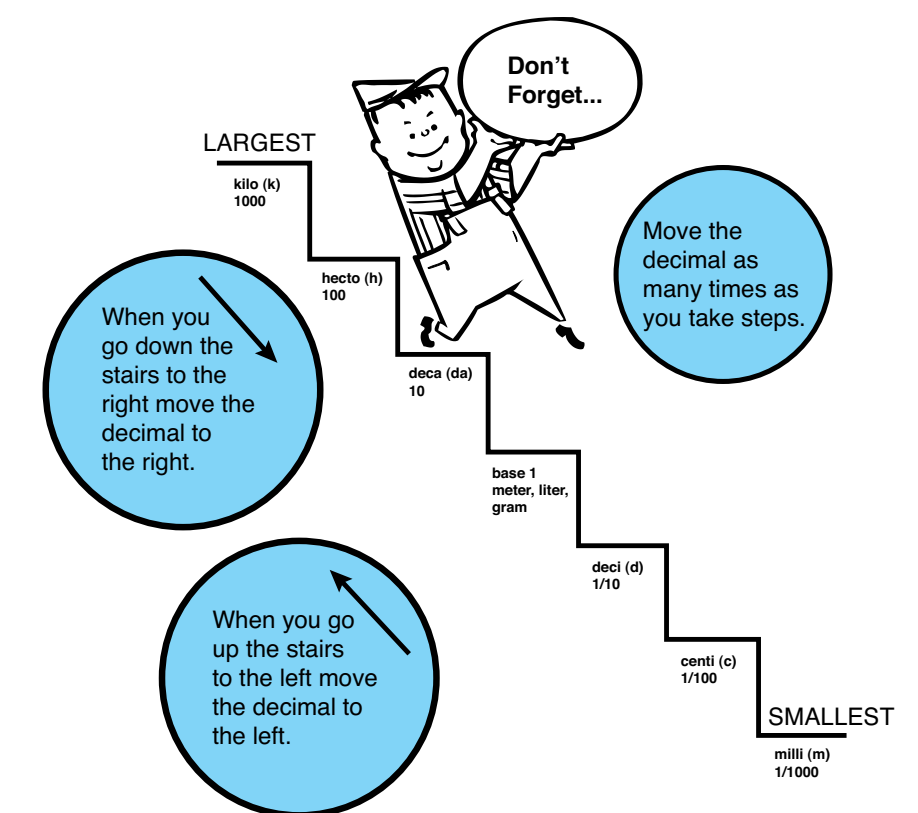


## SCIENCE

**Volume =** length x width x height



### The Metric Staircase



### Measurement

- The same object can be described using different measurements.
- Familiarity with known benchmark measurements can help you estimate and calculate other measurements.
- The length of an object is a one-dimensional attribute. Length can be the measurement of a single measure of the object or a combined linear measure, like perimeter.
- The area of an object is a two-dimensional attribute. Area can be a single measure of a 2-D shape on an object or a combined measure of a 3-D shape, like surface area.