DAY 1 – MEASURING

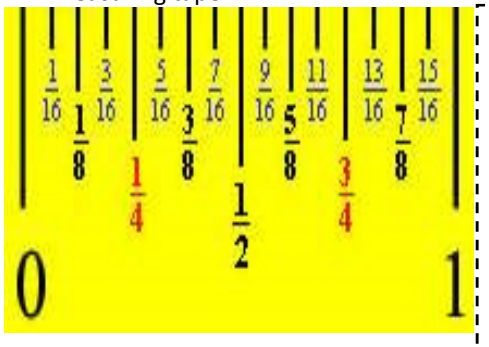
1. Where Will You See Imperial Units Used?

_____ House floor plans are still calculated in sq. feet,not sq. metres

_____ Wood lengths (ie. a "two-by-four" is a piece of wood that is 2 inches thick and 4 inches wide)

_____ How many of us know our height in feet and inches (ie. 5' 3") versus centimetres?

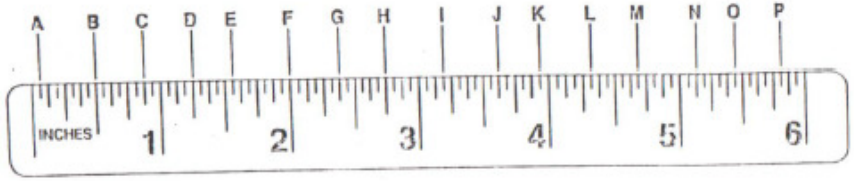
2. Record equivalent fractions to help you understand how to use the measuring tape



When performing conversions how do you decide which ratio to multiply by?

3.

Read the indicated measures on the ruler below. It measures lengths up to 6" to the nearest 16th inch. **Hint:** All measures are reduced to lowest terms.



A. _____ B. _____ C. _____ D. _____

E. _____ F. _____ G. _____ H. _____

CONVERTING BETWEEN UNITS

Type:	_____	_____	_____
Imperial Unit abbreviations	Inch ____or ____ Foot____or ____ Yard ____ Mile ____	Teaspoon ____ Tablespoon ____ Fluid ounce ____ Cup ____ Pint ____ Quart ____ Gallon ____	Ounce ____ Pound ____ Ton ____
Temperature $^oC = \frac{5}{9}(F - 32)$ $^oF = 1.8C + 32$			
Conversion for Imperial only	12 in = 1 ft 3 ft = 1 yd 1760 yd = 1 mi	16 tbsp = 1c 16 fl oz = 1 pt 2 pt = 1 qt 8 pt = 1 gal	16oz = 1lb 2000 lb = 1ton
Conversion Between both	30.48 cm = 1 ft 2.54 cm = 1 in 1.6 km = 1 mi	15 mL = 1 tbsp 29.57 mL = 1 fl oz 0.473 L = 1 pt 3.785 L = 1 gal 1L = 4 c	28.35 g = 1 oz 454 g = 1 lb 0.454 kg = 1 lb 0.9 t = 1 ton (US)
Conversion for Metric only	10 mm = 1 cm 100 cm = 1 m 1000 m = 1 km	1000 mL = 1 L	1000 g = 1 kg 1000 kg = 1 t
Metric Unit abbreviations	Millimeter ____ Centimeter ___ Meter ____ Kilometer ____	Millilitre ____ Litre ____	Gram ____ Kilogram ____

1year=365days 1day=24hours 1hour=60min 1min=60sec

4.

The weather forecast calls for 12 cm of snow. How many inches can you expect?

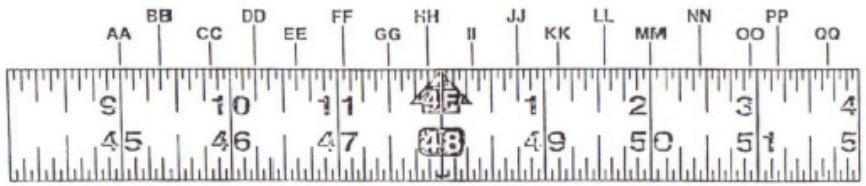
5.

Joe is travelling in the United States. A road sign indicates he is 228 mi from his destination. How many kilometres is Joe from his destination?

DAY 2 – More Measuring

1.

Refer to the ruler below. Read these measures in feet and inches to the nearest 16th of an inch.



Just inches:

AA. _____ BB. _____ CC. _____ DD. _____ PP. _____

Now feet and inches:

AA. _____ BB. _____ CC. _____ DD. _____ PP. _____

2. **Converting Temperature**

The temperature in Calgary is 18°C. The temperature in Green Bay is 50°F, and the temperature in Rochester is 40°F.

a) Find difference in temperature between Calgary and Green Bay in degrees Celsius.

b) Find the difference in temperature between Calgary and Rochester in degrees Fahrenheit.

More Converting

3. **Single step conversion**

10 mi kilometres

4. **Multi step conversion – because of power**

2300 cm^2 ft^2

5. **Multi step conversion – because of missing conversion link**

1250mL c

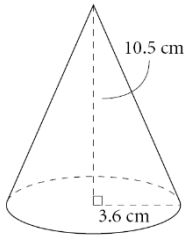
6. **Comparison of prices**

The gas station on Maine Street charges $24 for 32 L of gas, while the gas station on Kane Street charges $25 for 10 gal of gas. Which store gives the most amount of gas for each dollar spent?

DAY 3 – USING FORMULAS

Find surface area and volume

1.

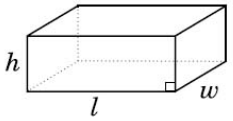
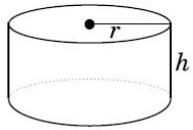
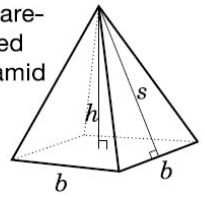


Recording units for
LENGTH

AREA

VOLUME

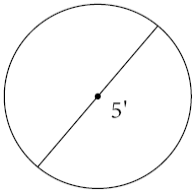
DRAW NETS

Rectangular prism 	
Cylinder 	
Square-based pyramid 	

DAY 4 – More Using FORMULAS

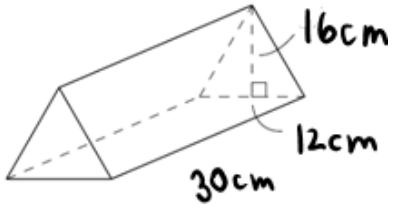
Find area and perimeter

1.

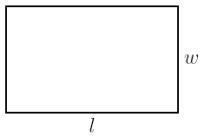
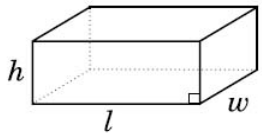
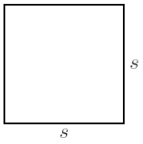
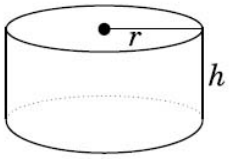
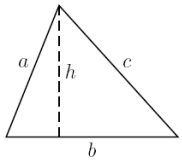
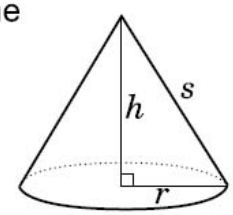
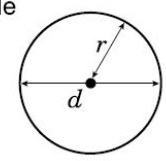
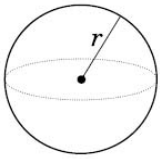
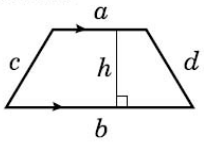
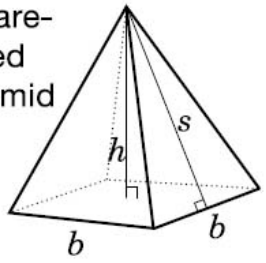
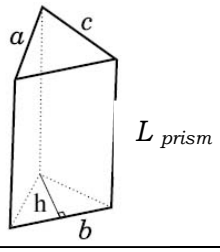


Find surface area and volume

2.



Formulas for all shapes

Rectangle 	$P = 2(l + w)$ $A = lw$	Rectangular prism 	$SA = 2lw + 2lh + 2wh$ $V = l \times w \times h$
Square 	$P = 4s$ $A = s^2$	Cylinder 	$SA = 2\pi r^2 + 2\pi rh$ $V = \pi r^2 h$
Triangle 	$P = a + b + c$ $A = \frac{bh}{2}$	Cone 	$SA = \pi r^2 + \pi rs$ $V = \frac{\pi r^2 h}{3}$
Circle 	$C = 2\pi r$ $A = \pi r^2$	Sphere 	$SA = 4\pi r^2$ $V = \frac{4\pi r^3}{3}$
Trapezoid 	$P = a + b + c + d$ $A = \frac{h}{2}(a + b)$	Square-based pyramid 	$SA =$ ***add Areas of all shapes when unfolded*** $V = \frac{l \times w \times h}{3}$
		Triangular prism  L_{prism}	$SA =$ ***add Areas of all shapes when unfolded*** $V = \frac{b_{tri} \times h_{tri}}{2} \times L_{prism}$ $V = \left(\frac{bh}{2}\right)(L)$

Conversion Chart

	LENGTH	VOLUME	MASS
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°F = 1.8C + 32

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