Are You Ready for ...

Learning Goal

Measurement & Geometry Unit: Diagnostic

A. Minds on Math

Discuss:

Describe a time where <u>you</u> have used measurement.

B. Which is larger?

1 yd OR 1 foot?

1 in OR 3 cm?

2 km or 1 mile?

1000 cm or 10 000 mm?

25 in OR $2\frac{1}{4}$ ft?

Some Helpful Relationships

Performing Conversions

Metric		Imperial
1 mm		0.03937 in.
1 cm	10 mm	0.3937 in.
1 m	100 cm	1.0936 yd
1 km	1000 m	0.6214 mile

Imperial		Metric
1 in.		2.54 cm
1 ft	12 in.	0.3048 m
1 yd	3 ft	0.9144 m
1 mile	1760 yd	1.6093 km

Metric		Imperial
1 L	1000 cm³	1.76 pt

C. Name It!

Figure	Perimeter/Circumference	Area
	$P = 2l + 2w$	$A = lw$
	$P = a + b + c$	$A = \frac{1}{2}bh$
	$C = \pi d, \; C = 2\pi r$	$A = \pi r^2$

What can you say about each of the following?

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D. Sketch It!

i) Based on the formulas shown, sketch, to the right, the figure (3D) they represent.
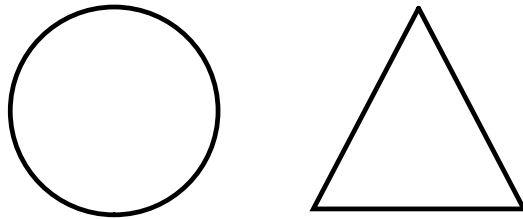
Figure	Surface Area	Volume	
A)	$SA = 2lw + 2wh + 2lh$		A)
B)		$V = \frac{1}{2}blh$	B)
C)	$SA = 2\pi rh + 2\pi r^2$		C)

ii) Fill in the missing *volume* formulas for figures A and C.
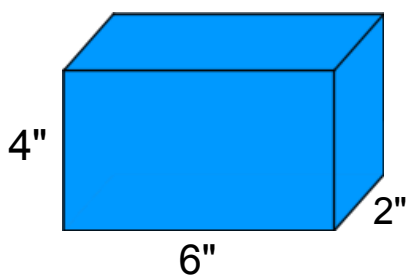
Answer each of the following to the best of your ability.

1) You need to compare these two shapes.

    a) What do you need/would you use to do the comparison?

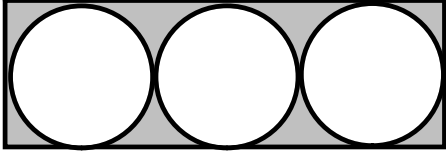   b) What units would you use? Why?

2) A triangular prism has a volume that is just slightly less than the volume of this rectangular prism.

What could the dimensions of the triangular prism be?

4"

2"

6"

3a) What would you need to calculate the shaded area of this shape?

3b) Describe how you would calculate the shaded area of the shape.