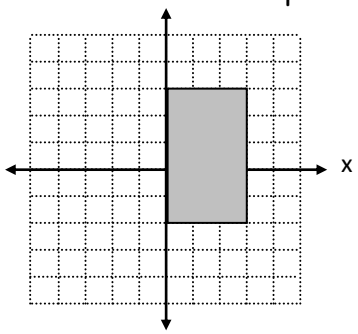
ROTATIONS

Based on what you learned in the video, determine what three dimensional shape will be created by rotating the two dimensional shape shown, 360° around the *y-axis.*

1.



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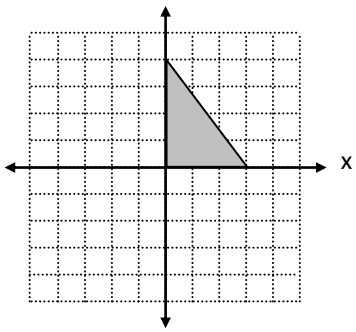
2.



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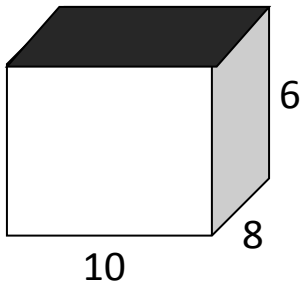
3. Find the volume of the shape formed in Problem #1

3D DIMENSIONAL CHANGE

Find the lateral area, surface area and volume:



What would happen if we doubled each side??

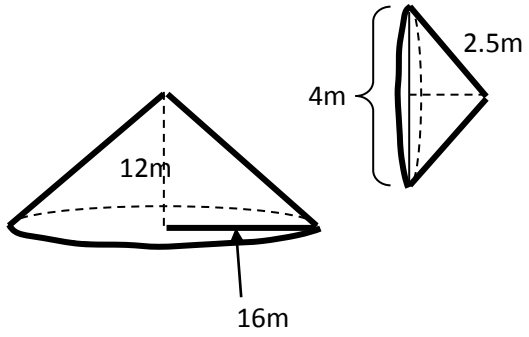
What is the ratio of the:

A) LAs _____ B) SAs _____ C) Volumes _____

Ratio of sides = $\frac{a}{b}$ (scale)	Ratio of areas =	Ratio of volumes =

Example 1)

A. What is the ratio of the radius of the larger cone to the radius of the smaller cone?



B. If the volume of the larger cone is 6144 cubic meters, what is the volume of the smaller cone?

Example 2)
What is the similarity ratio of two squares with surface areas 225 m^2 and 400 m^2? What is the volume ratio?

Example 3)
The volume of two similar cones is 1024π and 54π. Find the ratio of their radii.