Volume of Cylinders, Pyramids, Cones, & Spheres **Name: _____**

 Period:

For each problem, watch the video. Then, solve the accompanying problem that is <u>similar</u> to the problem in the video. Sketch a diagram. Show your calculations. Report your final solution.

1)

Video:	https://www.youtube.com/watch?v=Vdt1AJcN2MQ
Problem:	Three tennis balls are resting in a cylindrical can. The can is one foot tall. Determine the volume of the air in the can to the nearest tenth of a cubic centimeter.

Solution:

2)

Video:	https://www.youtube.com/watch?v=U5rO0VQLR6s
Problem:	The base of a square-based pyramid has an area of 100 cm^3. The slant height of the pyramid is 13 cm. Determine the volume of the pyramid.

Solution:

3)

Video:	https://www.youtube.com/watch?v=Ex-peEPTWGI&feature=youtu.be&t=6s
Problem:	The volume of a cone is 60π cm^3 and its radius is 6 cm. Determine its height and slant height.

Solution:

4)

Video:	No video is available for this problem.
Problem:	The cone from problem #3 fits perfectly on top of a cylinder (see diagram below). Both the pyramid and the cylinder have the same height. Determine the volume of the cylinder. How many times larger is the volume of the cylinder compared to the cone? Determine the total volume of the entire solid (the come/cylinder complete solid).

Solution: