



Problem 1 – Oblique Cylinder

Start the *Cabri Jr.* application by pressing **[APPS]** and selecting **CabriJr**. Open the file *CYL1* by pressing **[Y=]** for **[F1]**, selecting **Open...**, and selecting the *CYL1* file.

In *CYL1*, you are given a cylinder with a certain radius and height. Move point *A* and answer the following questions. To grab a point press **[ALPHA]**. Press it again to let go, or press **[CLEAR]**.

1. What do you notice about the dimensions of the cylinder when you move point *A*? Record the measurements of the dimensions that do not change when *A* is moved.

2. Using the formulas for the area of a circle and volume of a cylinder, show your work to explain how you could calculate the area and volume of the oblique cylinder.

3. How does the angle of the slant of the cylinder affect the volume of the cylinder?

Problem 2 – Triangular Pyramid

Open the *Cabri Jr.* file *CAV1*. In *CAV1*, you are given a triangular pyramid and two parallel cross sections. Move point *A* and answer the following questions.

4. What do you notice about the cross-sectional areas of the triangles when you move point *A*?

