NAME:_____

1. Select a can of food and measure its diameter and height. Find its volume.

2. Outline a plan for determining the thickness of a paper towel in a roll containing 80 towels if you know that each towel measures 11 in. by 9.3 in.

3. Which changes the volume of a cylinder more, doubling the radius or doubling the height? Justify your answer.

4. Explain how to find the radius of the base of a cone if you know its volume and height.

[1]   Check students' work.

[2]   Find the volume of the towels by subtracting the volume of the tube from that of the towels. Then find the volume of each sheet in terms of h and the total volume of paper in terms of h. Then solve for h by equating the two figures you determined.

[3]   Doubling the radius; doubling the height gives new volume $2\pi r^2 h$ and doubling the radius gives $4\pi r^2 h$.

[4]   First, multiply the volume by 3. Then divide by π and by the height. Finally, take the square root of the result.