

Cylinder: $V = \pi r^2 h$

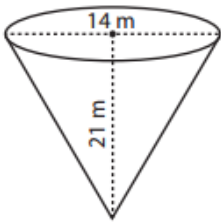
Sphere: $V = \frac{4}{3} \pi r^3$

Cone: $V = \frac{1}{3} \pi r^2 h$

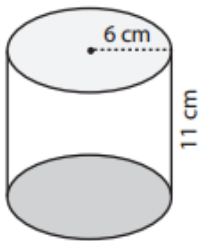
Circle: $A = \pi r^2$

Find the volume of the following figures. Leave your answers in terms of π . **Show all work. Label your answers.**

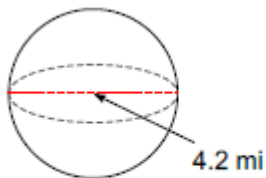
1)



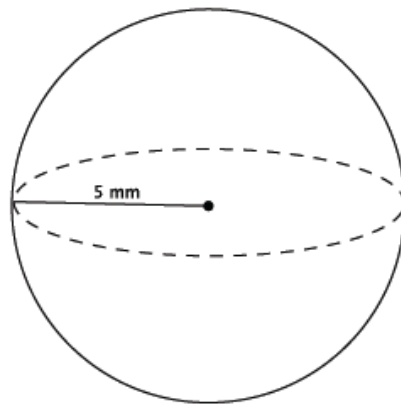
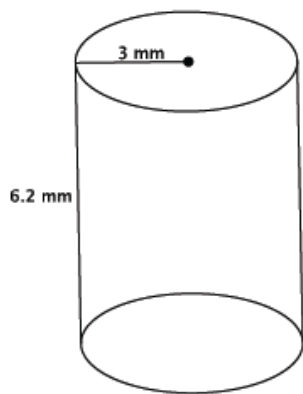
2)



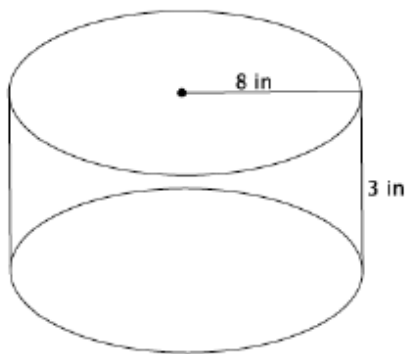
3)



4) Which of the two figures below has the greater volume? **Show work to prove your answer.**

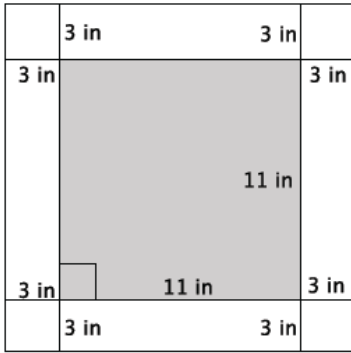


5)
You want to fill the cylinder shown below with water. All you have is a container shaped like a cone with a radius of 3 inches and a height of 5 inches; you can use this cone-shaped container to take water from a faucet and fill the cylinder. How many cones will it take to fill the cylinder?



Show your work.

6) Calculate the area of the 3-inch white border of the square figure below. **Show your work.**



Bonus: Find the area of the shaded region. **Show your work.**

