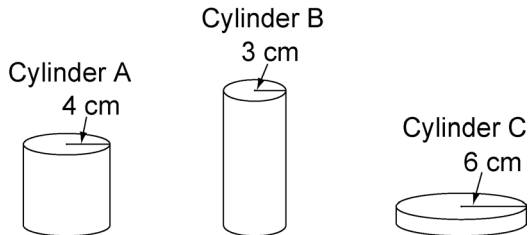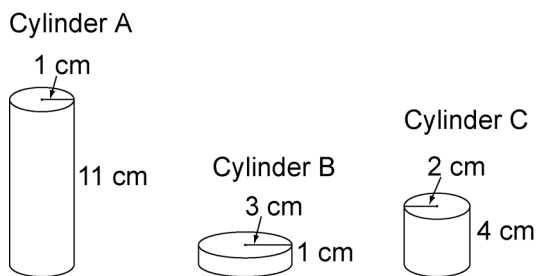Name: _____   Date: _____

Practice: Maximize the Volume of a Cylinder

For all questions, round your answer to the nearest tenth of a unit when necessary.
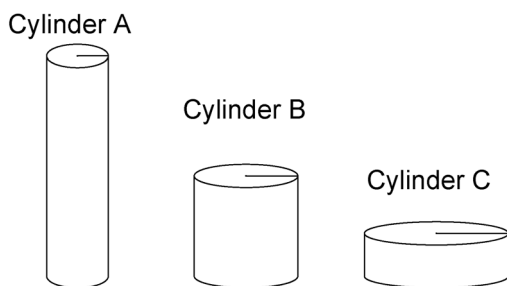
1. Each cylinder has surface area 302 cm^2.

Cylinder B
3 cm

Cylinder A
4 cm

Cylinder C
6 cm

2. Each cylinder has surface area 75.4 cm^2. Order the cylinders from greatest to least volume.

Cylinder A
1 cm

11 cm

Cylinder B
3 cm
1 cm

Cylinder C
2 cm
4 cm

3. Each cylinder has the same surface area. Order the cylinders from greatest to least volume.

Cylinder A

Cylinder B

Cylinder C

4. Find the radius and height of the cylinder with maximum volume, given the surface area.
  a) 250 cm^2 **b)** 500 cm^2
  c) 40 cm^2 **d)** 475 cm^2
  e) 750 cm^2 **f)** 1000 cm^2