Chapter 9 Test

Volume and Surface Area of Solids

Chapter 9 Test
Name_____
Class _____

Ms. Angie
Date_____

Show all your work and box your final answer.

1.) Name the solid that can be formed from the net.

2.) The diagram shows a slice of cheese in the shape of a triangular prism. What cross section is formed when the cheese is sliced into half along the dotted lines.

Find the volume and surface area of each solid. You may use a calculator and use 3.14 as an approximation for pi.

3.

Surface Area_____

Volume_____

4.

5.

Surface Area_____

Volume_____

Surface Area_____

Volume_____

Solve. Show your work. You may use a calculator and use 3.14 as an approximation for Pi.

6. A pyramid has a rectangular base with a length of 9 feet and a width of 8 feet. Given that its volume is 144 cubic feet, what is the height of the pyramid?

7. A cone has a slant height of 6 inches and lateral surface area of 47.1 square inches. What is the base radius of the cone?

8. The diagram shows a cylinderical glass in two sizes - small and large. The dimensions are given in the diagram.

a) what is the difference in volume between the two glasses?

b) What is the total surface area of the two glasses?

Hint: There is no top surface for each glass.

9. Kylie bought a necklace to give to her grandmother. The necklace has a total of 60 spherical pearls. If the diameter of each pearl is 6 millimeters, find the total surface area of all 60 pearls.

10. The diagram shows a silo in the shape of a hemisphere sitting on top of a cylinder. The silo needs a new coat of paint. find the total surface area to be painted using the given dimensions in the diagram.

Bonus: Joseph made a model rocket by attaching a cone on top of a cylinder, as shown in the diagram. The cone has height of 12 inches and slant height of 13 inches. The cylinder has a height of 18 inches and radius of 5 inches.

a) What is the surface area of the model rocket?

b) What is the volume of the model rocket?