

Name: _____

Spheres

Exercise 1: Find the surface area and the volume of each sphere. Round your answer to the nearest hundredth.

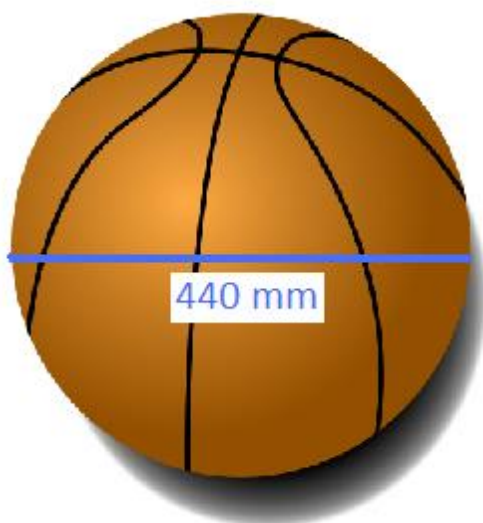
1)



2)



3)



4)



5)



Exercise 2: Find the surface area of a sphere with:

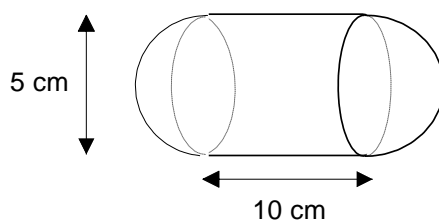
- 1) A diameter of length 24 meters.
- 2) A radius of length 10 inches.
- 3) Radius of length 7 feet
- 4) A diameter of length 18 centimeters

Exercise 3: An ice cream cone is 10 centimeters deep and has a diameter of 4 centimeters. A spherical scoop of ice cream that is 4 centimeters in diameter rests on top of the cone. If all the ice cream melts into the cone, will the cone overflow? Explain.

Exercise 4: The diameter of Earth is about 7900 miles.

- 1) Find the surface area of Earth to the nearest hundred square miles.
- 2) Find the volume of Earth to the nearest hundred cubic miles.
- 3) Most of Earth's atmosphere is less than 50 miles above the surface. Find the volume of Earth's atmosphere to the nearest hundred cubic miles.

Exercise 5: A solid plastic toy is made in the shape of a cylinder which is joined to a hemisphere at both ends.

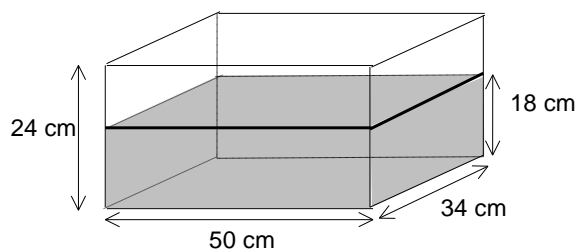


The diameter of the toy at the joins is 5 cm.
 The length of the cylindrical part of the toy is 10 cm.
 Calculate the volume of plastic needed to make the toy.

Exercise 6: A water tank is 50 cm long, 34 cm wide and 24 cm high. It contains water to a depth of 18 cm.

Four identical spheres are placed in the tank and are fully submerged. The water level rises by 4.5cm.

Calculate the radius of the spheres.



Exercise 7: A solid object is formed by joining a hemisphere to a cylinder.

Both the hemisphere and the cylinder have a diameter of 4.2 cm.

The cylinder has a height of 5.6 cm.

Calculate the total surface area of the whole object.

