Name _____

Date _____

WORKING WITH SPHERES

Working with Spheres

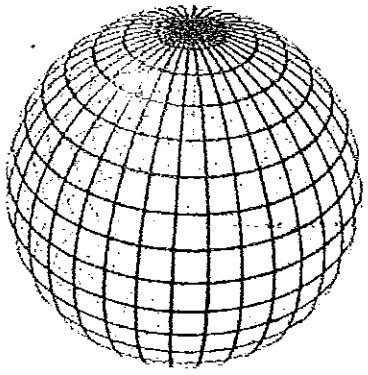
A sphere is like a ball. All points on the sphere are equidistant (of equal distance) from the centre. It is _____ to draw a net of a sphere. The formula for a sphere's surface area depends only on the _____ and _____.

The formula for the surface area of a sphere is:

$$SA = 4\pi r^2$$

Example

(a) The radius of the following sphere is 28 cm. What is its surface area?



(b) A ball has a surface area of approximately 9900 cm^2. What is its radius?

(c) The earth's radius is 6370km.

Lets determine:

(a) the circumference

(b) the surface area of Earth

(c) the surface area of each hemisphere

1. Find the surface area of a sphere with a radius of 1.3 m.

2. Find the surface area of a sphere with a diameter of 24.8 mm.

3. Find the surface area of a hemisphere with a radius of 18.5 cm.

4. A tennis ball has a diameter of 6.7 cm. What is its surface area?

Answers:

1. 21.2 m^2 2. 1932.2 mm^2 3. 3225.8 cm^2 4. 140.95 cm^2