Surface Area of Spheres

A <u>sphere</u> is a round ball-shaped three dimensional solid. Every point on the surface of the sphere is the same distance from the centre of the sphere.

<u>Orange Peeling Activity</u>: Record the results from your experiment here:

Circumference	Radius	Area of circle	Area of Orange Peel	$\dfrac{Area\ of\ Orange}{Area\ of\ Circle}$

Surface Area of a Sphere: $A_{total} =$

<u>Example 1</u>: An adult human eyeball has a diameter of 2.5 cm. Calculate the surface area of the eyeball, to the nearest tenth of a square centimeter.

<u>Example 2</u>: The radius of a sphere is tripled. Does this triple the surface area of the sphere? Explain.

<u>Example 3</u>: The surface area of an orange is 147 cm^2. What is the diameter of the orange? Round your answer to two decimal places.

Example 4: A spherical balloon is blown up, covered in paper
maché and painted. The surface area of the
masterpiece is 400π cm². A hole is drilled through
the sphere in order to hang the sphere like a necklace
from the ceiling. The chain used to hang the sphere
must be 1.2 m on either side of the sphere. The
chain costs $48/m, what is the total cost of the
chain including 13% taxes?
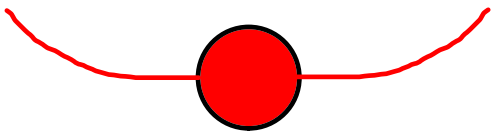
Today's Practice Questions:
Pgs. 459-460 # 1b, 2 - 6, 8, 11, 12