



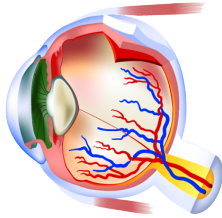
8 - Measurement Relationships  
8.6, 8.7 - Volume and Surface  
Area of Spheres



### 8.6 and 8.7 Surface Area and Volume of a Sphere

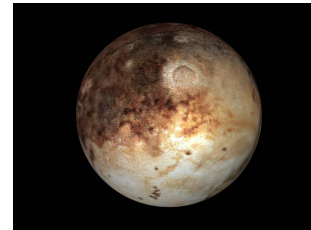
Ex 1. The dimensions of an adult eyeball are reasonably constant. The average diameter is 2.5cm. Calculate the surface area of the eyeball.

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



Ex 2. Pluto is the smallest planet in the solar system. The diameter of Pluto is approximately 2290 km. Calculate the volume of Pluto.

$$V = \frac{4\pi r^3}{3}$$



Ex 3. Golf balls are stacked three high in a rectangular prism package. The diameter of one ball is 4.3cm.

a) What is the amount of material needed to make the box?

b) How much empty space is in the box after the golfballs are packed?

