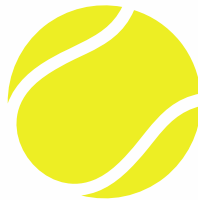# Volume of Sphere

Concept

The equation for finding the volume of sphere is probably most difficult to explain, But we will use a simple example that hopefully will help you better to understand the equation. Below are some examples of sphere. As you can see spheres are like globes and balls.

A sphere is perfectly round object that is three dimensional Every point on it's surface is the exact same distance from it's center. It is like a circle that has been Spun around and around
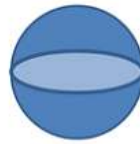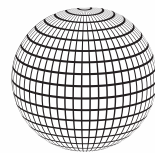
$2\pi r$ πr^2 $4\pi r^2$ $\dfrac{4}{3}\pi r^3$

You already know how to find volume of pyramids(area of bas x height)÷ 3 .The height is the radius of sphere. And we know to divide by 3, But how many these tiny pyramids do we have ? In other words, how do we find the area of all the bases.

(r/3) x (surface area of sphere) = r/3 (area of all the bases put together

If we need to find the area off all the bases than that is the same as the surface area of the entire sphere and the equation for the surface area of a sphere is $4\pi r^2$

(r/3) x (surface area of sphere) or (r/3) $4\pi r^2$

Volume of the sphere = $\dfrac{4}{3}\pi r^3$

Area = B
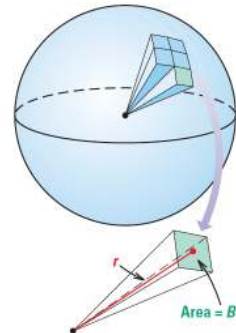
Assignment

Find the volume of each

a)
8 cm

b)
10 inches

c)
12 cm

d)
8 m