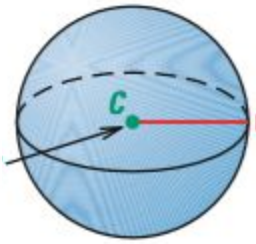
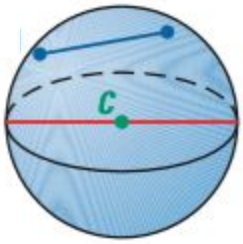
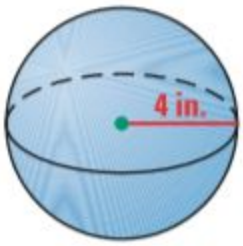




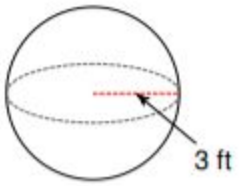
Surface Area of a Sphere (Theorem 12.11)	The surface area S of a sphere with radius r is $S = 4\pi r^2$	

1. Find the surface area of the spheres below:

a.



b.



c.

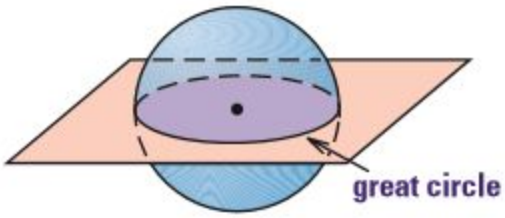
When a plane intersects a sphere the intersection is:

1.

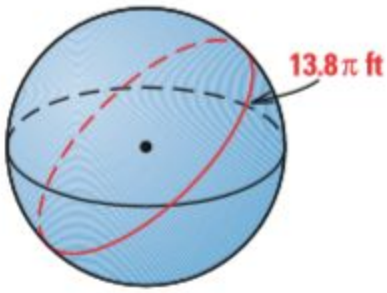
2.

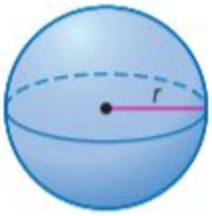
If the intersection is contains the center of the sphere the intersection is a _____

Great circle cuts the sphere into

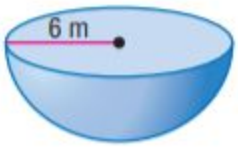


2. The circumference of a great circle of the sphere below is 13.8π feet. What is the surface area of the sphere?

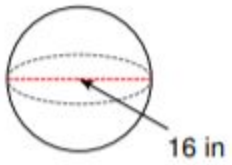


Volume of a Sphere (Theorem 12.12)	The volume V of a sphere with a radius r is $V = \frac{4}{3}\pi r^3$	

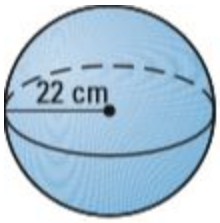
3. Find the volume of each sphere or hemisphere below:
   a.



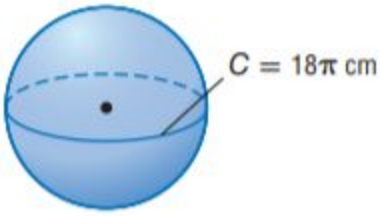
b.



c.



4. A sphere with a great circle circumference is 18π cm. Find the volume of the sphere.



5. Find the volume of the hemisphere given that the diameter is 16 cm.

6. Find the volume of the sphere given that the area of the great circle is $55\pi\ in^2$.