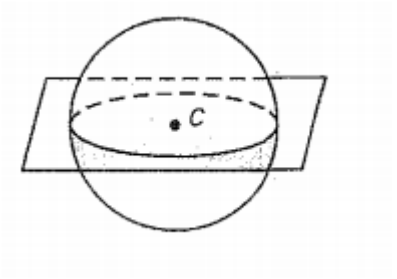
Homework 3.6 Finding Volumes of 3-D Shapes: Spheres

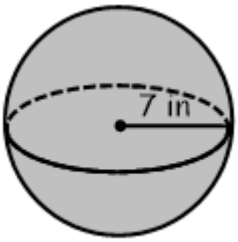
The center of the sphere is C and its circumference is 12π. Answer questions 1 – 3 using this information.



1. What is the crossection of the sphere called? _____
2. Find the radius of the sphere. _____
3. Find the diameter of the sphere. _____
4. Find the surface area for half a sphere. _____

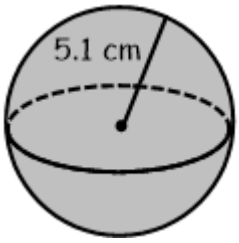
Find the volume of the sphere. Round your answer to two decimal places.

5.



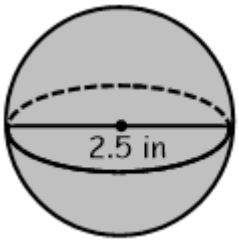
V = _____

6.



V = _____

7.



V = _____

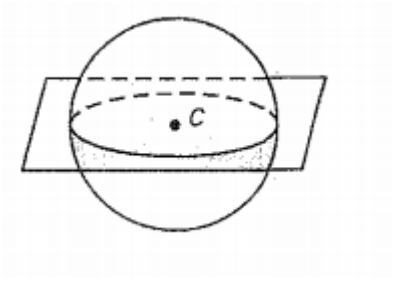
Find the radius of a sphere with the given volume, V. Round to two decimal places where possible.

8. $V = 1260\pi$ yd^3	9. $V = 49\pi$ ft^3	10. $V = 37.7$ m^3

11. What happens to the Volume of a sphere if you double the radius?

Homework 3.6 Finding Volumes of 3-D Shapes: Spheres **Solutions**

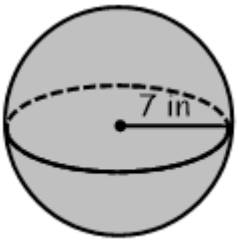
The center of the sphere is C and its circumference is 12π. Answer questions 1 – 3 using this information.



1. What is the crossection of the sphere called? The Great Circle
2. Find the radius of the sphere. r = 6
3. Find the diameter of the sphere. d = 12
4. Find the surface area for half a sphere. 72π or 226.19 cm^2

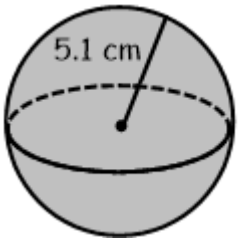
Find the volume of the sphere. Round your answer to two decimal places.

5.



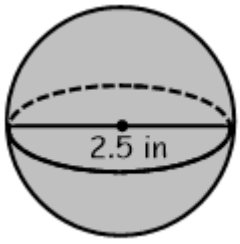
V = 1436.76 in^3

6.



V = 555.65 cm^3

7.



V = 8.18 in^3

Find the radius of a sphere with the given volume, V. Round to two decimal places where possible

8. V = 1260π yd^3	9. V = 49π ft^3	10. V = 37.7 m^3
r = 9.81 yds.	r = 3.32 ft.	r = 2.08 m.

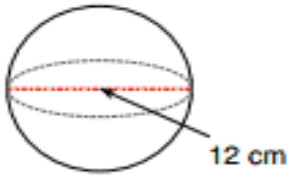
11. What happens to the Volume of a sphere if you double the radius?

When the radius of a sphere doubles the volumes becomes 8 times bigger

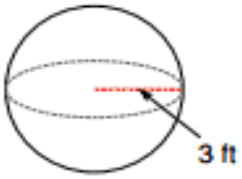
Homework 3.6 Finding Volumes of 3-D Shapes: Spheres (Page 2)

Find the surface area of the sphere. Round your result to one decimal place.

12.



13.



14.

15. The circumference of a sphere is 338π meters. What is the surface area of the sphere? Round to two decimal places.

SA and Volume of a Sphere

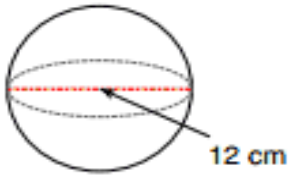
$$SA = 4\pi r^2$$

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

Homework 3.6 Finding Volumes of 3-D Shapes: Spheres (Page 2) **Solutions**

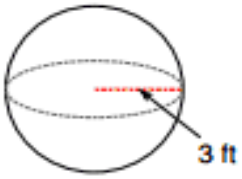
Find the surface area of the sphere. Round your result to two decimal places

12.



452.4 cm^2

13.



113.1 ft^2

14.

764.5 in^2

15. The circumference of a sphere is 338π meters. What is the surface area of the sphere? Round to two decimal places.

SA = 358, 908.11 m^2

SA and Volume of a Sphere

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

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