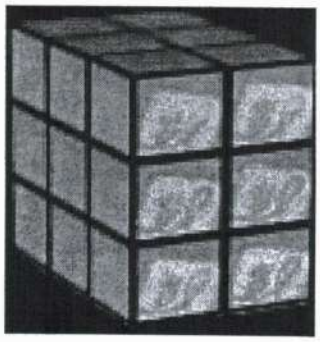
Volume of Cylinders, Cones & Spheres

Volume

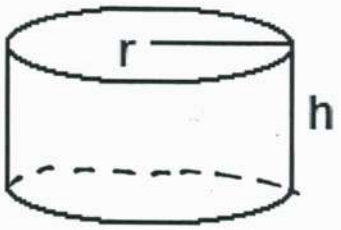
Volume – the number of cubic units inside a three-dimensional figure.



There are 18 cubic units in the figure.

Cylinder

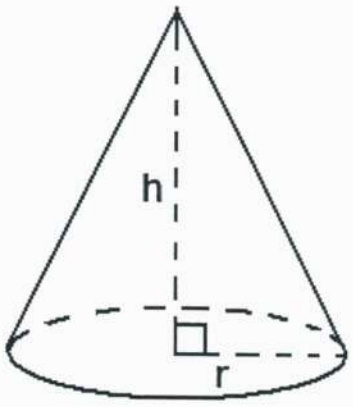
Cylinder – a three-dimensional figure with two congruent, circular bases in parallel planes and a curved lateral surface.



Volume = $\pi r^2 h$

Cone

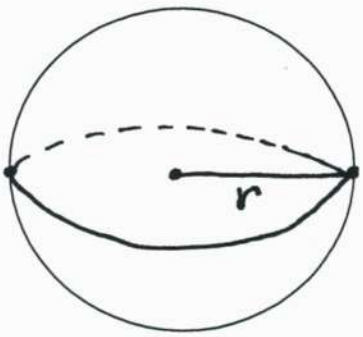
Cone – a three-dimensional figure with a circular base and a vertex that is not in the same plane as the base.



Volume = $\frac{1}{3}\pi r^2 h$

Sphere

Sphere – a three-dimensional figure that contains all of the points that are the same distance away from a center point.



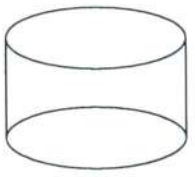
Volume = $\frac{4}{3}\pi r^3$

Geometry Name_____

Assignment

Date_____ Period____

Name each figure.

1) 

cylinder

2) 

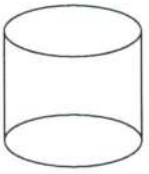
cone

3) 

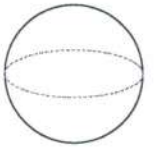
sphere

4) 

cone

5) 

cylinder

6) 

sphere

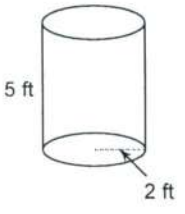
Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

7) A cylinder with a radius of 6 m and a height of 12 m.

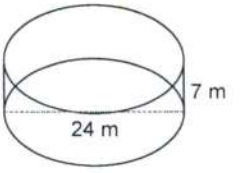
1357.17 m^3

8) A cylinder with a diameter of 14 cm and a height of 12 cm.

1847.26 cm^3

9) 

62.83 ft^3

10) 

3166.73 m^3

55

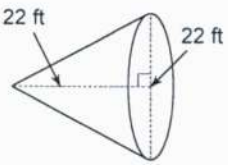
11) A cone with radius 8 cm and a height of 16 cm.

1072.33 cm^3

12) A cone with diameter 22 m and a height of 22 m.

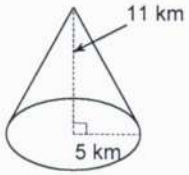
2787.64 m^3

13)



2787.64 ft^3

14)



287.98 km^3

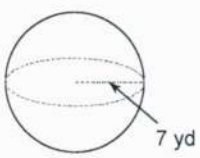
15) A sphere with a radius of 9 mi.

3053.63 mi^3

16) A sphere with a radius of 6 in.

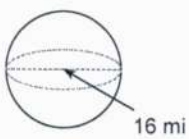
904.78 in^3

17)



1436.76 yd^3

18)



2144.66 mi^3

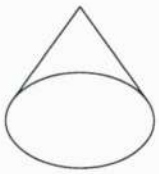
56

Geometry Name_____

Assignment

Date_____ Period____

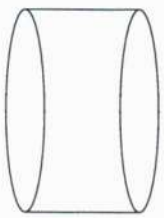
Name each figure.

1) 

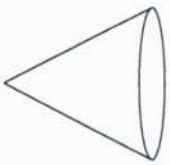
cone

2) 

sphere

3) 

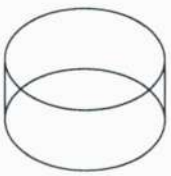
cylinder

4) 

cone

5) 

sphere

6) 

cylinder

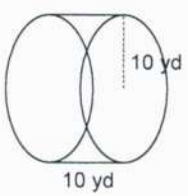
Find the volume of each figure. Round your answers to the nearest hundredth, if necessary.

7) A cylinder with a radius of 6 mi and a height of 6 mi.

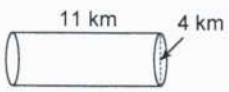
678.58 mi^3

8) A cylinder with a diameter of 18 in and a height of 6 in.

1526.81 in^3

9) 

3141.59 yd^3

10) 

138.23 km^3

57

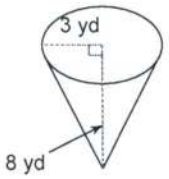
11) A cone with radius 7 mi and a height of 14 mi.

718.38 mi^3

12) A cone with diameter 22 yd and a height of 22 yd.

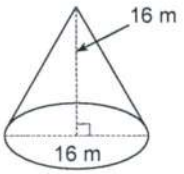
2787.64 yd^3

13)



75.4 yd^3

14)



1072.33 m^3

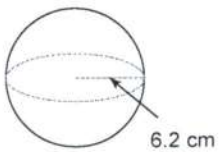
15) A sphere with a radius of 12 cm.

7238.23 cm^3

16) A sphere with a diameter of 23.6 ft.

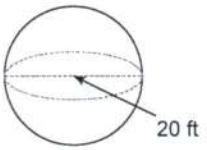
6882.32 ft^3

17)



998.31 cm^3

18)



4188.79 ft^3

58