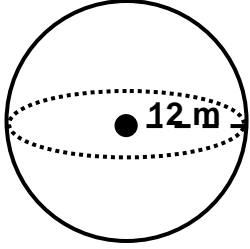
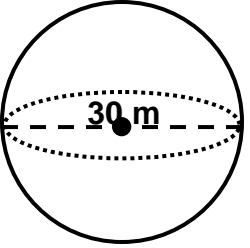


Review #15: Spheres, Composite Figures, & Changing Dimensions

REVIEW

Part 1: Surface Area & Volume of Spheres

Find the measure(s) indicated. For questions 1-6, answers to the even numbers should be rounded to the nearest hundredth, if necessary. All other answers should be EXACT.

<p>1. SA = _____</p> <p>V = _____</p>	
<p>2. SA = _____</p> <p>V = _____</p>	
<p>3. _____</p>	<p>The Volume of a sphere is 2304π cubic units. Find the length of the radius.</p>
<p>4. _____</p>	<p>What is the volume of a hemisphere, if the radius is 9?</p>
<p>5. SA = _____</p>	<p>The circumference of a great circle of a sphere is 44π. Find the Surface Area of the sphere.</p>

6. _____

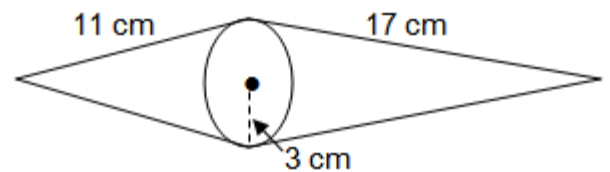
The Surface Area of a sphere is 64π square units. Find the length of its radius.

Part 2: Composite Figures
Find the measure(s) indicated.

7. SA = _____

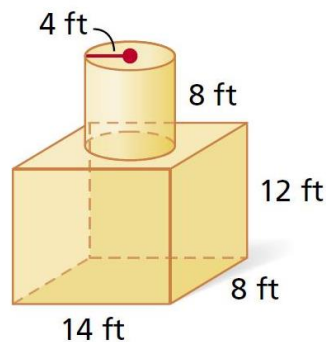
V = _____

Determine the surface area and volume of the composite figure to the nearest tenth. The figure is two right cones with a common base.



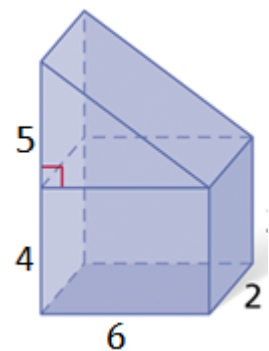
8. _____

Find the composite volume of the figure below



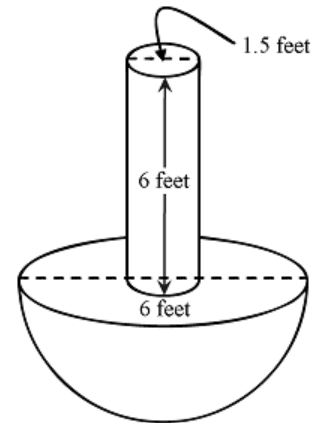
9. _____

Find the Volume of the composite figure. Round to the nearest hundredth if necessary.



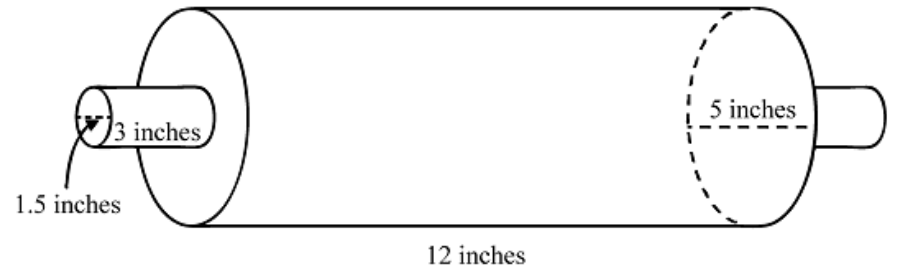
10. _____

What is the volume of the top toy pictured below?
Round to the nearest hundredth.



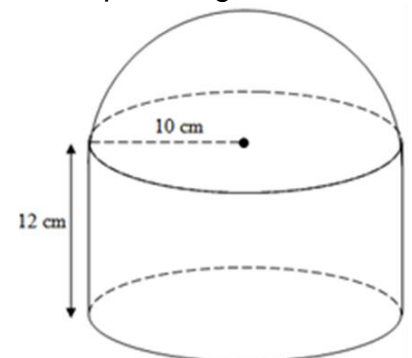
11. _____

A rolling pin has two identical cylindrical handles attached to a larger handle that is 12 inches long. The large cylinder measures 5 inches in diameter and the handles measure 1.5 inches in diameter. What is the volume of the rolling pin in cubic inches? Round to the nearest tenth.



12. SA = _____

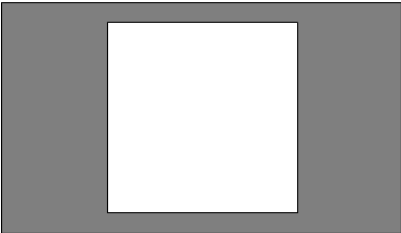
Find the EXACT Surface Area of the composite figure.



Part 3: Changing Dimensions
Answer each problem as indicated.

13. _____	The Lateral Surface Area of a cone is 80π mm ² . If its dimensions are increased to four times their original length, what is its new Lateral Surface Area?
14. _____	The volume of a cylinder is 144π cubic meters. If the radius is tripled and the height stays the same, what would the new Volume be?
15. _____	If the dimensions of a cylinder are increased to three times their original length, by what factor would the volume be affected?
16. _____	If the dimensions of a pyramid are increased to 5 times their original length, what would the new volume be if the original volume was 261cm^3 ?
17. _____	The Total Area of a cylinder is 96π cm ² . If its dimensions are reduced to one-half their original length, by what factor would the Total Area be affected?
18. _____	The Volume of a cone is 48π cubic units. If its radius is reduced to one-half its original length and the height is tripled, what would its new Volume be?

Part 6: Review

19. _____	Find the height of a rectangular prism with a 4-meter-by-12-meter base and a volume of 336 cubic meters.
20. _____	Find the total surface area in terms of π for a cylinder with a radius of 5 cm. and height of 10 cm.
21. _____	<p>The base length of the larger rectangle is 12 cm and the height is 8 cm. The square inside the rectangle has a base length of 6 cm. Find the area of the shaded part of the figure.</p> 
22. _____	Find the volume of a cone with slanted height of 3 in. and a diameter of 2 in.
23. _____	A square pyramid has a base side length of 4 m. and a slanted height of 10 m. What would be the lateral surface area of the square pyramid?