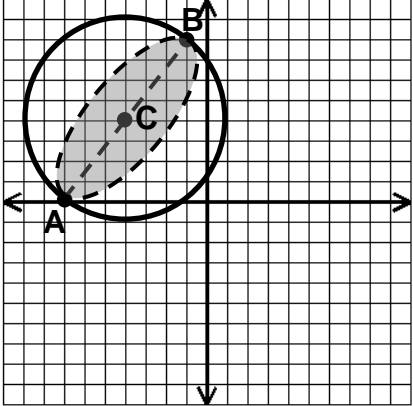NAME_____DATE_____PER._____

SURFACE AREA & VOLUME OF SPHERES

Find the indicated measure(s) for each sphere described. For problems 1 – 6, answers to even numbered problems should be rounded to the nearest thousandth. All other answers should be EXACT.
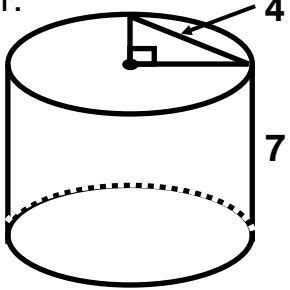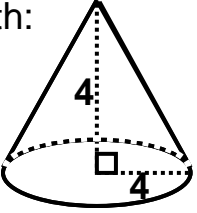
1. SA = _____ V = _____	Radius = 9 cm
2. SA = _____ V = _____	Radius = 3m
3. V = _____	Surface Area = 100π square units
4. SA = _____	Volume = 288π cubic cm.
5. SA = _____ V = _____	d = 42 ft

6. SA = _____ V = _____	Circumference of great circle = 16π m.

Use the sphere graphed in the coordinate plane below to answer the following questions.

	7. _____	What is the EXACT Surface Area?
8. _____		What is the Volume rounded to the nearest thousandth?
9. _____		What is the equation of a line containing the radius of the great circle shown?
10. _____		Write the equation of a line perpendicular to the one in problem 9 that passes through the center of the sphere.

REVIEW PROBLEMS
Solve each problem as indicated.

11) LA = _____ TA = _____ V = _____	Find the EXACT measures for the cylinder: 4 7
12) LA = _____ TA = _____ V = _____	Find the measures to the nearest thousandth: 4 4

Find the correct answer for each of the following. Clearly circle your answers.
You must show work to receive credit.

13. A section of a tree with a 13-inch diameter is used as a beam in a log house. If the section is 12 feet long, what is its approximate volume?

   A. 530 in³

   B. 1590 in³

   C. 2030 in³

   D. 19,110 in³

14. About 70% of Earth's surface is water. About how much of Earth's surface is water if Earth's diameter is about 7920 miles?

   A. 6.57 x 10⁷ mi²

   B. 1.38 x 10⁸ mi²

   C. 2.60 x 10¹¹ mi²

   D. 7.80 x 10¹¹ mi²

15. Which could be an appropriate description?

   A. the circumference of a circle in square inches.

   B. the lateral area of a cylinder in meters.

   C. the rate of gasoline consumption in gallons.

   D. the volume of a cone in cubic feet.

16. Which statement is an accurate statement about the relationship between the slant height l of a right circular cone and its height h?

   A. $l^2 + h^2 = r^2$

   B. $l^2 - h^2 = r^2$

   C. $l > h$

   D. $l > h + r$