Volume of an Ellipsoid

Practice Your Understanding

Name: _	
Date:	

1. Write down the equation for calculating the volume of an ellipsoid below:

2. Using this formula calculate the volume of an ellipsoid that has a a-axis radius of 1.4 m, a b-axis radius of 5.3 m, and a c-axis radius of 8.9 m. Show all work and record your answer below:

3. Given the volume of an ellipsoid to be 19653.45 m^3 , and a b-axis radius to be 23.6 m, find the a-axis and b-axis radii if they are equal to each other. You can use a calculator for this problem, but show all the steps you would take to solve this problem and record your answer below:

4. What is the c-axis radius of an ellipsoid that has a a-axis radius of $\sqrt{1}$ m, a b-axis radius of $\sqrt{1}$ m, and a volume of 145.35 m³? You can use a calculator for this problem, but show all the steps you would take to solve this problem and record your answer below:

5. What is the volume of a ellipsoid that has the a-axis, b-axis, and c-axis radii have a value all equal to $\frac{31}{50}$ m? What would you call an ellipsoid of this type? Does the shape resemble something else? Show all work and record your answer below: