W.S. – Regents Practical Review for Eccentricity

Procedure: Complete the following steps and answer the questions associate with the steps.

Step 1: On the map ellipses on the back of this page, insert a push pin through the center of "C" and "D", so that the pins are firmly in the board.

Step 2: Place the loop around the pins. Then place your pencil inside the loop and construct an ellipse.

Step 3: Remove the pins and loop of string and place them in appropriate location.

Step 4: Using the metric ruler, measure the distance between the foci of the ellipse to the nearest 10th place. Record this in the chart below and use correct units.

Step 5: Using the metric ruler, measure the length of the major axis of the ellipse to the nearest 10th place. Record this in the chart below and use correct units

Step 6: Calculate the eccentricity of the asteroids ellipse to the nearest 1000th place. Record this in the chart below.

Step 7: Below the chart, answer the following questions.

Chart – Data	
Distance between foci of the ellipse	
Length of the major axis	
Eccentricity	

Questions:

1. What is the eccentricity for *Saturn*?

Compare Saturn's eccentricity to the value of the eccentricity of the asteroid.

2. What is the eccentricity for *Neptune*?

Compare Neptune's eccentricity to the value of the eccentricity of the asteroid.

3. Mark an "s" above one of the focal points to show that this is the sun. Place an "x" on the orbit you drew where you believe the planet is moving the **fastest**. Why is this where the planet is moving the fastest?

