Gravity on Eros Worksheet

Name:_____ Form: _____ Date: _____

To complete this worksheet, refer to the following web pages on ESCIntranet:

1. Astronomy/Solar System/Weight and Escape Velocity Calculator
2. Astronomy/Solar System/Small Bodies/NEAR at Eros/An Astronaut on Eros - Imagine That

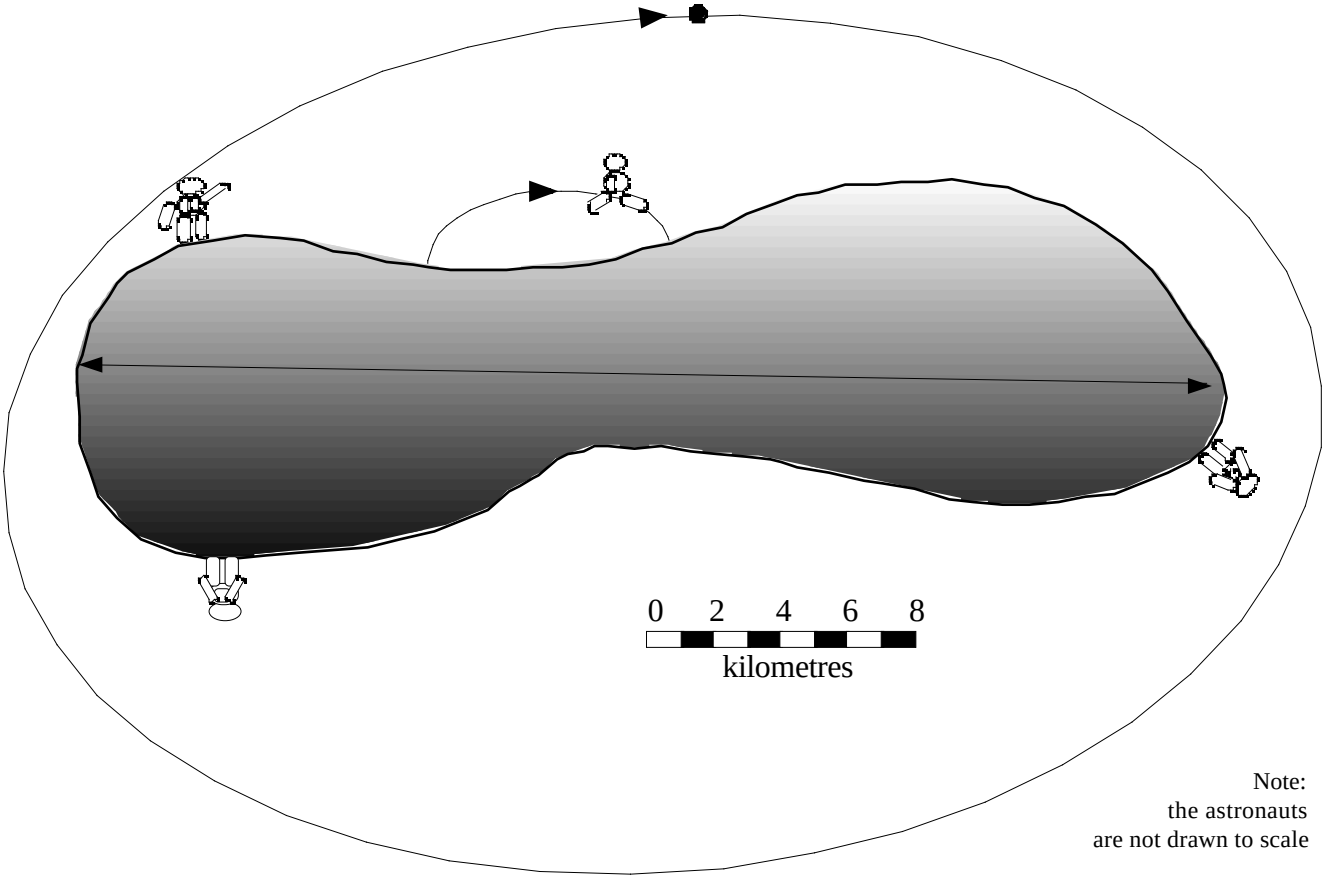
1. What is escape velocity? _____

   _____

2. Use the *Weight and Escape Velocity Calculator* to complete the table:

Place	My Weight	Escape Velocity
Earth		
Eros		

3. Write the length of asteroid Eros on the figure below.



Note:
the astronauts
are not drawn to scale

4. If you were an astronaut on Eros, you would be able to walk completely around the asteroid. Explain why you would not fall off as you moved down the side and along the underside?

   _____

5. If you were an astronaut on Eros, you would be able to jump for kilometres.

   Explain why:_____

6. If you were an astronaut on Eros, you would be able to throw a ball fast enough to place it in orbit. (Be careful! Make sure it doesn't hit you in the back of the head!)

   How fast would you have to throw the ball? _____ kilometres per hour

7. Explain why the astronauts are not drawn to scale on the diagram: _____

   _____