

Matthew Helguera

INTD 290

Professor Hanson

Asynchronous Activity 1.1

1. Distance from the star to the path of the planet from the right: 91404 thousand miles.

Distance from the star to the path of the planet from the left: 94395 thousand miles.

No, they are not the same number.

2. A perfectly circular orbit would mean that it would always be the same distance from the star, which is usually the sun for Earth.

Gravity

3. The Planet stops circling around the star and it starts to wander into space away from the star.

Without the gravitational pull, the planet goes off course and starts to wander off into space.

4. The Path of the Planet starts to become bigger and the distance from the star to the planet becomes larger. The distance becomes further, and the orbit becomes larger.

5. If you change the velocity of the planet orbiting around the star, you start to see that the planet starts to spin out of control, and it loses its course of orbit. It loses its orbit and spins out of control. It is not on the regular orbit and goes off track.

Kepler's Law

6. By changing the mass of the planet, the orbit speed of the planet circling around the star starts to slow down and it starts to move at a slower constant motion. However, this does not affect the orbit around the star. It stays the same as it was before. Yes, it does depend on its mass. It could/could not be the same for planets. It just depends on the size of the planet.

7. Yes, these triangles have the similar amount of area. It shows that these triangles have a similar amount of area because as stated in Kepler's 2nd law, a planet moves in its ellipse so that the line between it and the sun placed at a focus sweeps out equal areas in equal times.