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INTD 290

Kepler's Laws Activity

The Basics: Circular and elliptical orbits

4. a) Distance on the right side: 90672 thousand miles

   b) Distance on the left side: 94209 thousand miles

   They are not the same numbers.

5. If the orbit was perfectly circular, the numbers on both sides would need to be the same.

Gravity

2. When you deactivate gravity, the planet starts travelling away from the star, which happens to be the direction of its velocity.

3. The force of gravity gets smaller as the planet gets farther away from the star.

Kepler's Laws

2. The mass of the planet does not change the force of gravity. It's the same for planets and objects on Earth.

3. $A = \frac{1}{2}hb$ Long-side $= \frac{1}{2}(46472)(5768)$

$= 134025248$ thousand miles^2

Close to eachother. Short-side $= \frac{1}{2}(19451)(12946)$

$= 125906323$ thousand miles^2