Question 1

Two objects, with masses m_1 and m_2, approach each other. Consider the gravitational potential energy,

$$U_{\mathrm{G}} = -G\frac{m_1 m_2}{r},$$

applied to this situation.

Which of the following is true as the objects approach each other?

1. U_{G} stays constant.
2. U_{G} decreases.
3. U_{G} increases.

Warm Up Question 1

An object is launched from the Moon's surface at exactly the escape velocity. Is the total energy of the object zero or not? Explain your answer.

1. Zero. Gravity eventually disappears infinitely far away.
2. Zero. Gravitaional energy is zero infinitely far away and so is kinetic energy.
3. Zero. Kinetic energy always matches gravitational energy.
4. Non-zero. There is kinetic energy.
5. Non-zero. There is kinetic energy and gravitational potential energy.

Warm Up Question 2

Which physics demonstration done in the class this semester was the most memorable?

1. Rolling cans.
2. Spinning wheel flipped.
3. Suspended spinning wheel.
4. Tumbling boxes.
5. Falling objects in air tubes.
6. Cart with ball launcher.
7. Rotating rods.
8. Quickest path.