Name:

Date:

Final Review: Energy

Questions 1-5 all refer to the scenario presented in question 1.

\_\_\_\_\_1. A 0.5-kg Butterfingers candy bar is dropped and you see it just before it hits the ground. The energy is transferred from

* 1. Kinetic to dissipated energy
  2. Gravitational potential to dissipated energy
  3. Gravitation potential to kinetic
  4. Kinetic to elastic energy

\_\_\_\_\_2. Assuming that the candy bar started with 15 J of energy, how much kinetic energy will the candy bar have right before it impacts the ground? (assume no air resistance)

* 1. 0 J
  2. 15 J
  3. 3.75 J
  4. 56.25 J

\_\_\_\_\_3. What will be the velocity of the candy right before impact?

* 1. 60 m/s
  2. 7.74 m/s
  3. 56.25 m/s
  4. 15 m/s

\_\_\_\_\_4. How much work must be done to lift a candy bar up (at constant) velocity to a height of 1.5 m?

* 1. 0 J
  2. 0.75 J
  3. 7.5 J
  4. 11.25 J

\_\_\_\_\_5. Assuming that the work is done in .5 s, what is the power rating?

* 1. 0 Watts
  2. 15 Watts
  3. 3.75 Watts
  4. 7.5 Watts

\_\_\_\_\_6. You push a 12-N box horizontally across the floor at a constant rate of 1.5 m/s. If you push the box 5 m, how much work was completed?

* 1. 0 J
  2. 60 J
  3. 90 J
  4. 7.5 J

Matching. You may use each letter more than once, or not at all.

1. Watt
2. Joule
3. Law of Conservation of Energy
4. Work Energy Theorem
5. Power

\_\_\_\_\_7. The rate of doing work is known as \_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_8.The \_\_\_\_\_ is the SI unit for power.

\_\_\_\_\_9. The \_\_\_\_\_\_\_\_\_\_\_ states that energy can be neither created nor destroyed.

\_\_\_\_\_10. The \_\_\_\_\_\_\_\_\_\_\_ states that the change in energy will be equal to the work.

\_\_\_\_\_11. The \_\_\_\_\_\_\_\_ is the SI unit for work.

\_\_\_\_\_12. The \_\_\_\_\_\_\_\_ is the SI unit for energy.