

8th Grade Physics 1
4.2 – Energy and Its Forms
Assessment

Name: _____

Period: _____

- 1) Describe the relationship between work and energy.
- 2) How is the kinetic energy of an object determined?
- 3) What factors determine the gravitational potential energy of an object?
- 4) Give an example of each of the major forms of energy (all 6).
- 5) When you heat a pot of water over a flame, what form of energy is added to the water?

- 6) What kind of energy is represented by an archer stretching a bow string?
- 7) Can an object have both kinetic energy and potential energy at the same time? Explain.
- 8) A 60 kg person walks from the ground floor to the roof of a 74.8 m tall building. How much gravitational potential energy does she have at the top of the building?
- 9) A pitcher throws a 0.145 kg baseball at a velocity of 30 m/s. How much kinetic energy does the ball have?
- 10) A Boeing 737 has a mass of 42,000 kg, carries 18,000 kg of fuel, and can carry cargo (including passengers) of 20,000 kg. As measured from the ground, this airplane has a kinetic energy of 2,745,760,000 J. What is the velocity of the airplane?