

# 8<sup>th</sup> Grade Physics 1

## 4.2 – Energy and Its Forms

### Practice Set

Name: \_\_\_\_\_

Period: \_\_\_\_\_

#### SHOW ALL WORK!

1. What is the kinetic energy of a jogger with a mass of 65.0 kg traveling at a speed of 2.5 m/s?



2. What is the mass of a baseball that has a kinetic energy of 100 J and is traveling at 5 m/s?



3. What is the kinetic energy of a 0.5 kg soccer ball that is traveling at a speed of 3 m/s?



4 What is the kinetic energy of a 1 kg pie travelling at a speed of 4 m/s ?

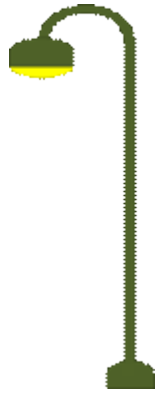


5. What is the kinetic energy of the pie if it is thrown at 10 m/s?

6. A student is hit with a 1 kg pumpkin pie. The kinetic energy of the pie 32 J. What was the speed of the pie?

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7. Find the gravitational potential energy of a light that has a mass of 13.0 kg and is 4.8 m above the ground.



8. An apple in a tree has a gravitational potential energy of 175 J and a mass of 0.36 kg. How high from the ground is the apple?



9. A marble is on a table 2.4 m above the ground. What is the mass of the marble if it has a GPE of 568 J?

10. A box with a mass of 12.5 kg sits on the floor. How high would you need to lift it for it to have a GPE of 355 J?

11. A cart at the top of a 300 m hill has a mass of 40 kg. What is the cart's gravitational potential energy?

12. Examine the graphic below.

What is the gravitational potential energy of the 6 kg cart as it sits at the top of the incline?

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What is the KINETIC ENERGY of the cart if it is moving at a speed of 2 m/s at the bottom of the ramp? \_\_\_\_\_

