

Energy Home Work

Name: _____

Classify the following as a type of potential energy or kinetic energy (use the letters K or P)

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|--|-------|--|-------|
| 1. A bicyclist pedaling up a hill | _____ | 2. An archer with his bow drawn | _____ |
| 3. A volleyball player spiking a ball | _____ | 4. A baseball thrown to second base | _____ |
| 5. The chemical bonds in sugar | _____ | 6. The wind blowing through your hair | _____ |
| 7. Walking down the street | _____ | 8. Sitting in the top of a tree | _____ |
| 9. A bowling ball rolling down the alley | _____ | 10. A bowling ball sitting on the rack | _____ |

What examples can you find in your home that are examples of kinetic and potential energy? (name two for each type of energy)

11. Kinetic: _____
12. Kinetic: _____
13. Potential: _____
14. Potential: _____

$$KE = 0.5 \cdot m \cdot v^2$$

OR

$$PE = m \cdot g \cdot h$$

v = velocity or speed

m = mass in kg

$g = 10 \text{ m/s/s}$

h = height in meters

15. You serve a volleyball with a mass of 2.1 kg. The ball leaves your hand with a speed of 30 m/s. The ball has _____ energy. Calculate it.
16. A baby carriage is sitting at the top of a hill that is 21 m high. The carriage with the baby has a mass of 1.5 kg. The carriage has _____ energy. Calculate it.
17. A car is traveling with a velocity of 40 m/s and has a mass of 1120 kg. The car has _____ energy. Calculate it.