

Energy Part II's

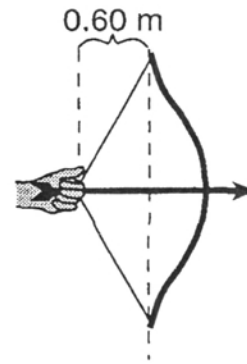
1. An object moving at a constant speed of 25 meters per second possesses 450 joules of kinetic energy. What is the object's mass?

2. An object weighing 15 newtons is lifted from the ground to a height of 0.22 meter. The increase in the object's gravitational potential energy is approximately

3. A cart weighing 10 Newtons is pushed 10 meters on a level surface by a force of 5 Newtons. What is the increase in its potential energy?

4. A mass resting on a shelf 10.0 meters above the floor has a gravitational potential energy of 980. joules with respect to the floor. The mass is moved to a shelf 8.00 meters above the floor. What is the new gravitational potential energy of the mass?

5. In the diagram below, an average force of 20. Newtons is used to pull back the string of a bow 0.60 meter.



As the arrow, leaves the bow, its kinetic energy is

6. A 0.10-kilogram ball dropped vertically from a height of 1.0 meter above the floor bounces back to a height of 0.80 meter. The mechanical energy lost by the ball as it bounces is approximately

7. A person does 100 joules of work in pulling back the string of a bow. What will be the initial speed of a 0.5-kilogram arrow when it is fired from the bow?