



5. A carpenter lifts a 10.0 kg piece of wood to his shoulder 1.50 m above the ground. He then sets the wood on his truck at 1.00 m above the ground and makes his delivery going 15.0 m/s.
- What is the wood's potential energy on the carpenter's shoulder?
  - What is the wood's potential energy on the truck?
  - What is the wood's kinetic energy during the delivery?
  - What is the kinetic energy during the delivery if the carpenter doubles his speed?
  - If the wood drops from the carpenter's shoulder, what would its maximum kinetic energy be?
6. If the total energy is 2450. joules of a cart moving at a velocity of 7.00 m/s, what is its mass?
7. If a 6200.0 kg truck has a kinetic energy of 8800.0 joules, what is its speed?
8. Describe the energy conversions that take place during a roller coaster ride, and at which points along the way is KE and PE at their max and min.
9. Explain the role friction plays in the conservation of energy.