Name:

Date:

**Work and Energy**

**Conceptual Problems**

1. Determine whether work is being done in each of the following examples:
   1. a train engine pulling a loaded boxcar initially at rest
   2. a tug of war that is evenly matched
   3. a crane lifting a car
2. What is the energy that is due to the motion of an object?
3. How does the kinetic energy of an object change if the object’s speed doubles?
4. What is the energy stored in the gravitational field of interacting bodies?
5. Energy associated with a compressed or stretched object is
6. Explain the form of energy involved in the following situations and how do the forms of energy differ from one another?
   1. a bicycle coasting along a level road
   2. heating water
   3. throwing a football
   4. winding the mainspring of a clock

How does the amount of energy change as the position of the object change, when KE is greatest, PE is greatest, and when KE&PE are taking place.



