Due 11/2

1. A ball is dropped from 18 meters. Find the velocity of the object just before it hits the ground.

2. A 100kg car is going 10 m/s. A force pushes on it to speed it up to 20 m/s.
   If a force pushed on it for 10 m, find the strength of the force.

3. A 2 kg object going 4.5 m/s stops when it compresses a spring (spring constant is 1.2 N/m).
   Find how far the spring was compressed.

4. A 6 kg object going 10 m/s stops because of friction.
   If the force of friction is 2.3 N, find how far it takes to stop it.

5. Motor A has a rating of 300 W. Motor B has a rating of 200 W. (See back of "*Work and Energy*.")
   A. Which motor is more powerful?
   B. How long would it take Motor A to do 6000 J of work?

   C. How long would it take Motor B to do 6000 J of work?

   D. Which motor did the work quicker?
   E. Which motor did more work?

   Using what you just learned….

6. Comparing a 75 W light bulb with a 100 W light bulb, which one does more work?

7. A 15 kg object going 8 m/s slows down to 3 m/s in 5 m. Find the force of friction that slowed down the object.

8. An object is 25 meters up into the air. How fast is it going when it is 6 meters from the ground?

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