Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**![MCj03300780000[1]]()Worksheet 3.2 Work and Potential Energy**

1. For the following situations determine whether work is done. Write yes if work is done and no if no work is done.

1. An ice skater glides for two meters across the ice.
2. The ice skater’s partner lifts her up a distance of 1 meter.
3. The ice skater’s partner carries her across the ice a

 distance of 3 meters.

1. After setting her down, the ice skater’s partner pulls her across the ice a

distance of 10 meters.

1. After skating practice, the ice skater lifts her 20-Newton gym bag up 0.5 meter.

2. You pull a sled through the snow a distance of 500 meters with a horizontal force of 225 Newtons. How much work did you do?

3. a) A crane does 3000 Joules of work to lift a steel beam a distance of 20 meters. How much force is applied to lift the beam?

b) The beam now has potential energy. How much PE does it have?

4. What is the potential energy of a 3 kilogram bowling ball that is on the ground?

5. a) You are on rollerblades on top of a small hill. Your potential energy is 1200 Joules. The last time you checked your mass was 63 kg. What is the height of the hill?

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b) How much work did you have to do to climb up the hill?