

Common Exam 3

April 11th, 2008, Friday, tomorrow

Time: 8:30-9:45 am (Arrive by 8:15 am)

Room: KUPF 205

Bring your scientific calculators

B1. Ch.5 and B2. Ch.7-8

Old exams are posted on course web:

<http://web.njit.edu/~kenahn/08spring/phy105.htm>

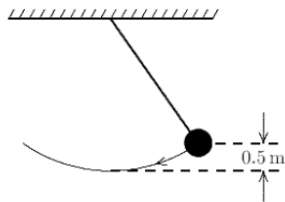
Example: Energy lost to friction

From sample problems for Exam 3

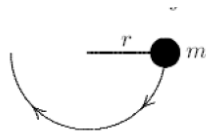
2. A 2-kg object is moving at 3 m/s. A 4-N force is applied in the direction of motion and then removed after the object has traveled an additional 5 m. The work done by this force is:

From sample problems for Exam 3

4. The long pendulum shown is drawn aside until the ball has risen 0.5 m. It is then given an initial speed of 3.0 m/s. The speed of the ball at its lowest position is _____.



5. A small object of mass m , on the end of a light cord, is held horizontally at a distance $r=0.5\text{ m}$ from a fixed support as shown. The object is then released. What is the speed of the object when the object is at its lowest point of its swing? (typos corrected)



6 In Fig. 8-25, a block slides along a track that descends through distance h . The track is frictionless except for the lower section. There the block slides to a stop in a certain distance D because of friction. (a) If we decrease h , will the block now slide to a stop in a distance that is greater than, less than, or equal to D ? (b) If, instead, we increase the mass of the block, will the stopping distance now be greater than, less than, or equal to D ?

