

Quiz #5B

Clearly indicate (with a box) your answers to the following questions. SHOW ALL WORK.

1. A 14.5-kg mass is dropped from a height of 13.1 meters onto a vertical spring, which compresses by a maximum of 0.450 meters. What is the spring constant of the spring?

2. A 3.5-kg block is pushed across a rough rough with an applied force of 67 Newtons, directed 32° below the horizontal. The block starts from rest and reaches a speed of 4.1 meters/sec after travelling a distance of 2.0 meters. Find and clearly indicate with a box the work done by each force present in this problem. Also, find the coefficient of kinetic friction between the block and the floor.