Physics 131   Name_____

QUIZ #5

1) A force does -6.0 J of work on a system as it moves first 4.0 cm in the x-direction and then 6.0 cm in the y-direction. If the x-component of the force is 100 N, what is its y-component?

2) A 10 kg box slides down a 20° incline and then compresses a spring 10 cm before stopping for an instant. The spring constant is 8500 N/m. The initial speed of the box was 2.0 m/s. How much work was done by gravity as the box slid down the incline?
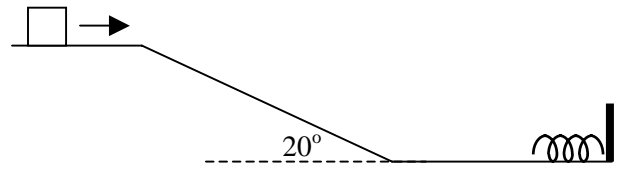
3) The top spring is stretched by 10 cm, the bottom is compressed by 10 cm and the mass is at rest. The springs are otherwise identical. If an additional identical spring is placed at the bottom and the mass is again found to be at rest, how much higher is its position?