Quiz #5A

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

1. A 27 kg block is pulled across a rough, horizontal floor by a rope at an angle of 25° above the horizontal. The tension in the rope is 141 N, and the block starts at rest. After the block have travelled a horizontal distance of 1.5 meters, it has a speed of 2.2 meters/sec.

a) The work done by the normal force.
b) The work done by the force of gravity.
c) The work done by the tension force.
d) The work done by friction.
e) The coefficient of kinetic friction.

2. A monkey swings on a 22.0-m long vine at an initial angle of 25.7° with respect to the vertical. If he pushes off with an initial speed of 2.5 meters/sec, what is his speed at the bottom of the swinging motion?