Problems of the Week No. 8,

Always show your work to receive credit (NO WORK=NO CREDIT)

1. A chain of length L and mass m is held on a frictionless table with one-fourth of its length hanging over the edge. How much work is required to pull the hanging part back onto the table?
    A. mgL/4   B. mgL/8   C. mgL/16   D. mgL/32

2. Let a particle of mass m have an initial velocity $v_o\mathbf{i}$ experience an elastic glancing collision with a particle of mass 2m initially at rest. After the collision, the first particle moves off in the forward direction at an angle of 45 degrees above the x-axis. What is the direction of the particle of mass 2m after the collision? The angle is measured below the x-axis.
    A. 16° B. 28° C. 43° D. 57° E. 72°