Physics 200   Name: _____
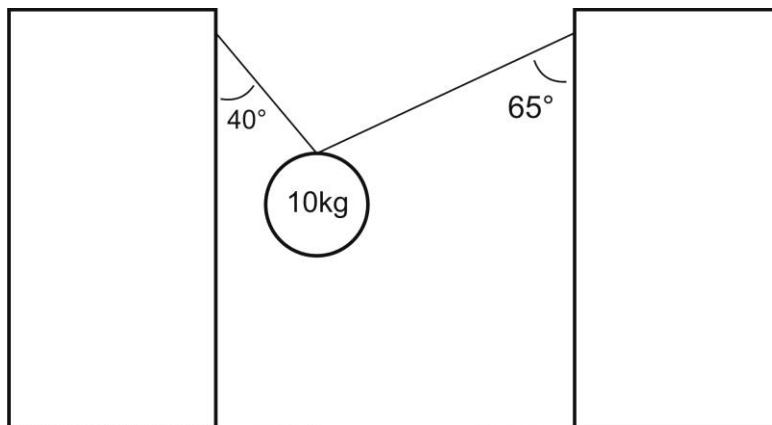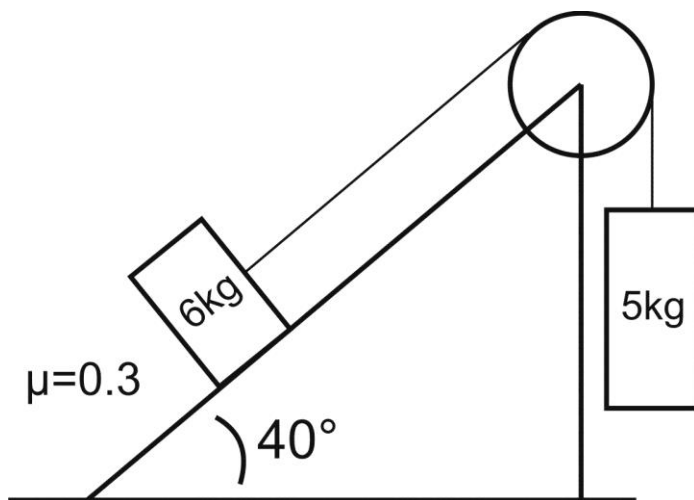Newton's Laws in 2 Dimensions – Practice Problems #1

1. The 10kg mass is in static equilibrium. Find the tensions in the two segments of rope.

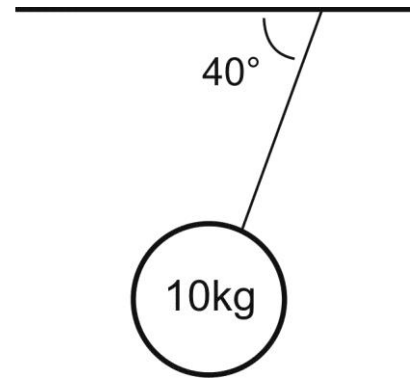2. Find the acceleration of the masses and the tension in the string.

    a = _____

    T = _____

3. The mass is suspended from the ceiling of a moving vehicle. The angle shown is constant. Find the acceleration of the mass and the tension in the string.

a = _____

T = _____

40°

10kg

4. Find the acceleration of the 8kg mass. ***To make this problem more interesting, use μ=0.2, instead***

F = 30N

130°

8kg

μ=0.4