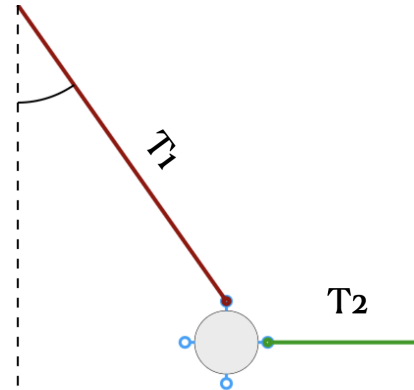
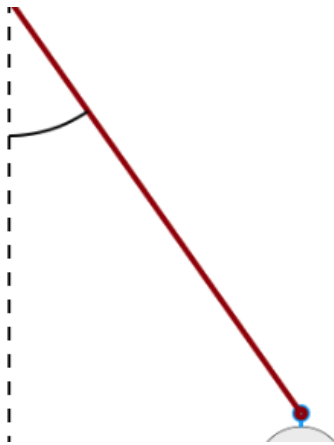


Static Equilibrium Level 1

Step 1: The picture to the right shows an object being held in place by two ropes. Fill in the mass of your object and the angle rope one makes with the vertical. Then draw in force vectors for the three forces that are present in the system. Then neatly show your calculation for the force of gravity on the object.



Step 2: Show the components for the force vector for the tension in rope 1. Label the components T_{1y} and T_{1x} . Then use $\Sigma F_y = 0$ to solve for T_{1y} . Then use the angle of the rope to find T_1 and T_{1x} . Show all of this work.



Step 3: Now use $\Sigma F_x = 0$ to find T_2 . Show this calculation neatly below. Enter your answers into your program to make sure you did everything correctly