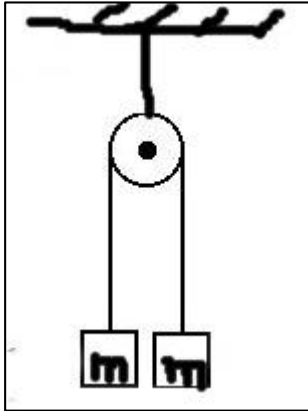


### Answer on Question #45775, Physics, Mechanics | Kinematics | Dynamics

**Task:** Two 10kg masses are suspended at the two ends of a rope , which passes over a light frictionless pulley . The pulley attached to a chain , which goes to the ceiling . What is the tension in the rope and chain ?

**Answer:**



Since the objects in your problem have the same mass, they will not be accelerating.

Since the chain is attached to the top of the pulley, the tension in the chain must be equal to the total weight of the two objects.

$$\text{Total weight } P = 20 * 9.8 = 196 \text{ N}$$

Since rope is not accelerating, each side of the rope is supporting the one half the total weight, tension in the rope is 98 N.