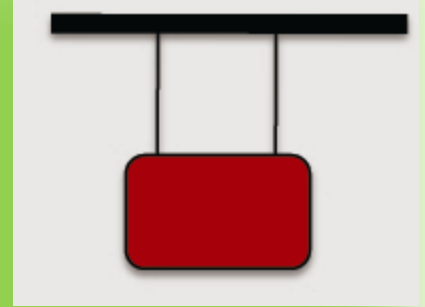


2.3 Review Questions

1. The object hanging from the ropes has a weight of 300 N.
 - a. What is the tension (force) on each of the ropes?
 - b. How would the tension change if the ropes were not hanging straight down?



2. If an object's motion is not changing, does that mean there are no forces acting on it? Why or why not?

3. Slide a hockey puck across a frozen lake and it eventually comes to a stop - even if you shoot it very hard and the ice is smooth and even. What makes the puck stop?

4. You are riding in an airplane. It is nighttime and there is very little light outside or inside the plane. Suddenly, you notice your seatbelt tightening at the front of your lap. What conclusion can you draw from this?

5. If the forces acting upon an object are balanced, then the object:
 - a. must not be moving.
 - b. must be moving with a constant velocity
 - c. must not be accelerating.
 - d. none of the above.

6. A boy weighing 745 N is hanging at rest from a trapeze bar.
 - a. If there is only rope holding the bar up, what is the tension in that rope?
 - b. If there are two ropes holding the bar up, what is the tension in each rope?
 - c. If there are four ropes holding the bar up, what is the tension in each rope?
 - d. If there were two ropes holding the bar up, but they weren't horizontal, how would the tension in each be different than your answer to "b"?

7. A crate is being pushed across the floor to the left at a constant velocity. If a person has to push with 500 N of force, how much friction must the floor be applying to the crate?

8. On a frozen, frictionless lake, a smooth stone is traveling South in Dynamic Equilibrium.
 - a. How much force is needed to keep it going?
 - b. What would be needed in order to get it to stop (be specific, use Physics terms)?