Monday Reading Assessment: Unit 4, Forces

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October 7, 2019

1 Chapter 4 - Forces

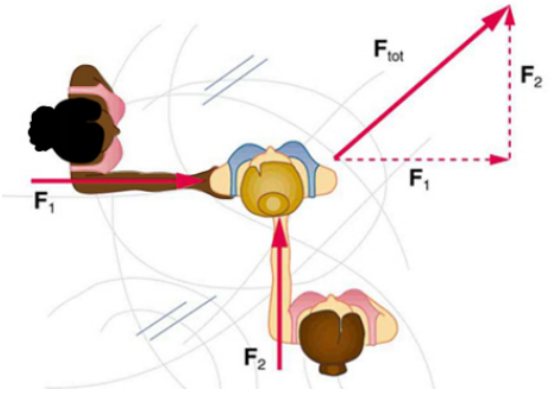

Figure 1: Two girls push a third while skating on ice.

1. According to Fig. 1, a girl pushes her friend in the middle with force $\vec{F}_1 = 10\sqrt{3}\hat{i}$ N. A second girl pushes with $\vec{F}_2 = 10\hat{j}$. (a) What is the magnitude of the net force? (b) In what direction is the net force?

2. Will the girl being pushed move at constant velocity? Why or why not?

3. Suppose an object is hanging from a rope, and being pulled upward with a **constant velocity** of 1.0 m/s. The object has a weight force of 40.0 N. (a) With what force is it being pulled? (b) Suppose we move upwards at 1.0 m/s. What do we perceive the velocity of the object to be?