

## Lab 04 Forces

### Pre-Lab

- 1) Consider two non-parallel forces acting on an object. Each of these forces has a specific magnitude and direction. We wish to add a third force such that the sum of all three forces is zero. Does this third force need to have a specific angle and magnitude or are there multiple angles and magnitudes that will work? EXPLAIN YOUR REASONING.

- 2) The below three forces are on an object at rest (no other forces are applied to the object). Determine the magnitudes of the two unknown forces. Show your work.

$$\vec{F}_1 = 80.0N \text{ at } 0.0^\circ$$

$$\vec{F}_2 = ???N \text{ at } 60.0^\circ$$

$$\vec{F}_3 = ???N \text{ at } 210.0^\circ$$