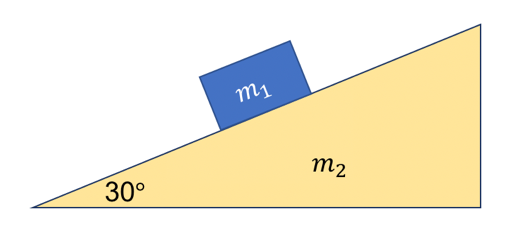
PHYS1110D – Engineering Physics: Mechanics and Thermodynamics

Tutorial Problems for Week 7: Linear Momentum

**Problem 1 – A Not Fixed Wedge**

A block of mass is placed on a frictionless wedge of mass . The wedge is placed on a frictionless plane and can move freely. The inclining angle of the wedge is . Find the magnitude and direction of the acceleration of .

**Solution**:

Since the wedge can move freely, it is no longer guaranteed that the acceleration of will be along the direction of the slope. This makes the problem more complicated.