

**Problems of the Week 5**

**Always show your work to receive credit (NO WORK=NO CREDIT)**

1. A block of mass  $m$  is placed on a  $60^\circ$  inclined plane of mass  $M$ . Assuming all surfaces are frictionless, calculate the normal force acting on block  $m$  in terms of  $g$ .

A.  $\frac{2Mmg}{4M + 3m}$

B.  $\frac{M(M - m)g}{2(M + m)}$

C.  $0.5(mg + Mg)$

D.  $\frac{1.73m(M - m)g}{(M + 2m)}$

