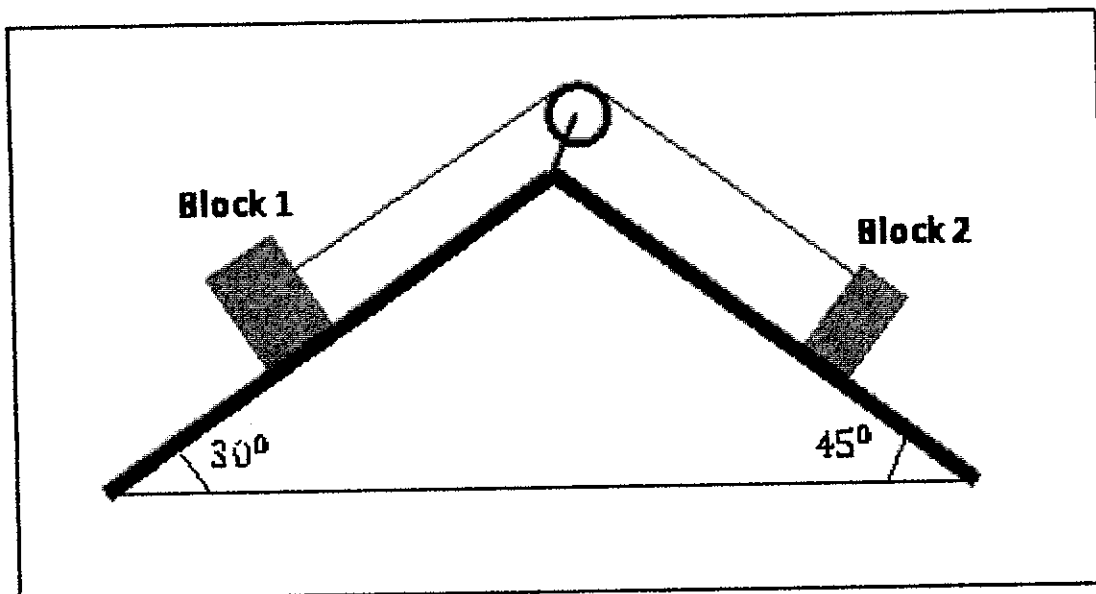


1. Two blocks are on inclined planes with angles 30° and 45° as shown in the figure. The mass of block 1 is 1 kg and the mass of block 2 is 4 kg. Find the tension in the rope and the acceleration of the blocks if the pulley is frictionless and the coefficient of kinetic friction between the blocks and incline planes is 0.2.



2. Provided that the coefficient of static friction between the block and inclined plane is 0.3 and the pulley is frictionless, what value(s) of m_2 will ensure that the system remains at rest? **Include an FBD for each mass.**

