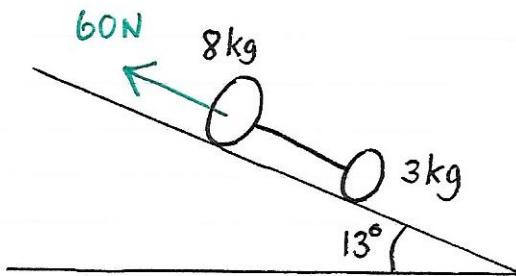


Connected Particles and Resistances on Inclined Planes

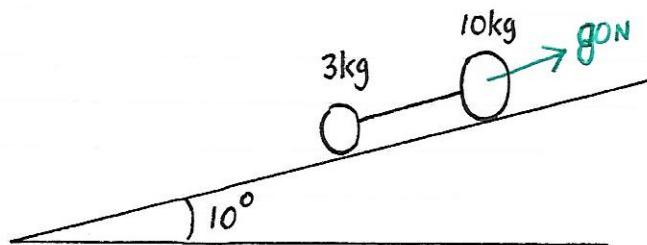
1)



- Driving force of 60N applied to 8kg up slope
- Total resistance acting on 8kg mass is 3N
- Total resistance acting on 3kg mass is 1N

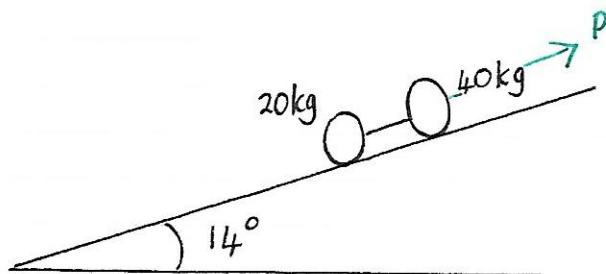
Calculate a) the acceleration up the slope
b) the tension in the coupling.

2)



- Slope is rough. $\mu = 0.4$
- Calculate the acceleration up the slope and the tension.

3)



- Slope is rough. $\mu = \frac{1}{5}$
- A force P is applied up the slope
- Acceleration is 0.05 m/s^2 down the slope

Calculate a) the value of P
b) the tension in the coupling