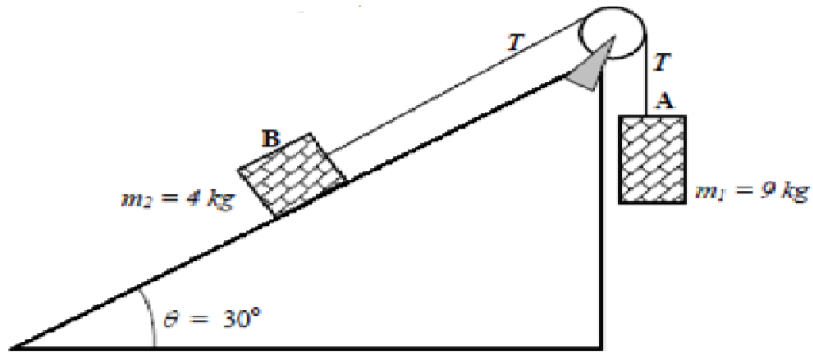


SANGAM SKM COLLEGE NADI

YEAR 13 PHYSICS

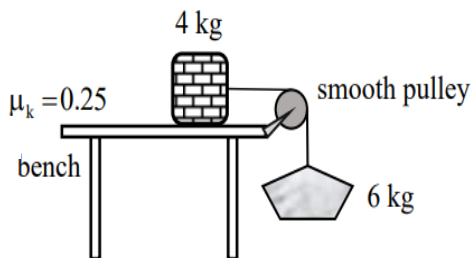
WORKSHEET 2: WEEK 3 FORCES AND THERE EFFECT

1. The coefficient of friction between 4kg mass and plane is 0.35



- Calculate the acceleration of the system
-
- Determine the tension in the string

2. Two masses, 7 kg and 3 kg are suspended over a frictionless pulley as shown below. The coefficient of kinetic friction, μ_k , between 4 kg mass and the bench is 0.15.



Calculate the:

- net force.
 - acceleration
 - tension.
3. An elevator and its load have a total mass of 800 kg. The elevator is moving upwards at 7 ms^{-1} . It is then brought to rest with constant acceleration over a distance of 12 m. Calculate:
- The acceleration while coming to rest.
 - The tension in the cable.
 - The force exerted by the floor of the lift on a 60 kg passenger as the lift slows down.