DYNAMICS ASSIGNMENT

Planar Kinetics of a Rigid Body (Equation of Motion – Translation)

by:

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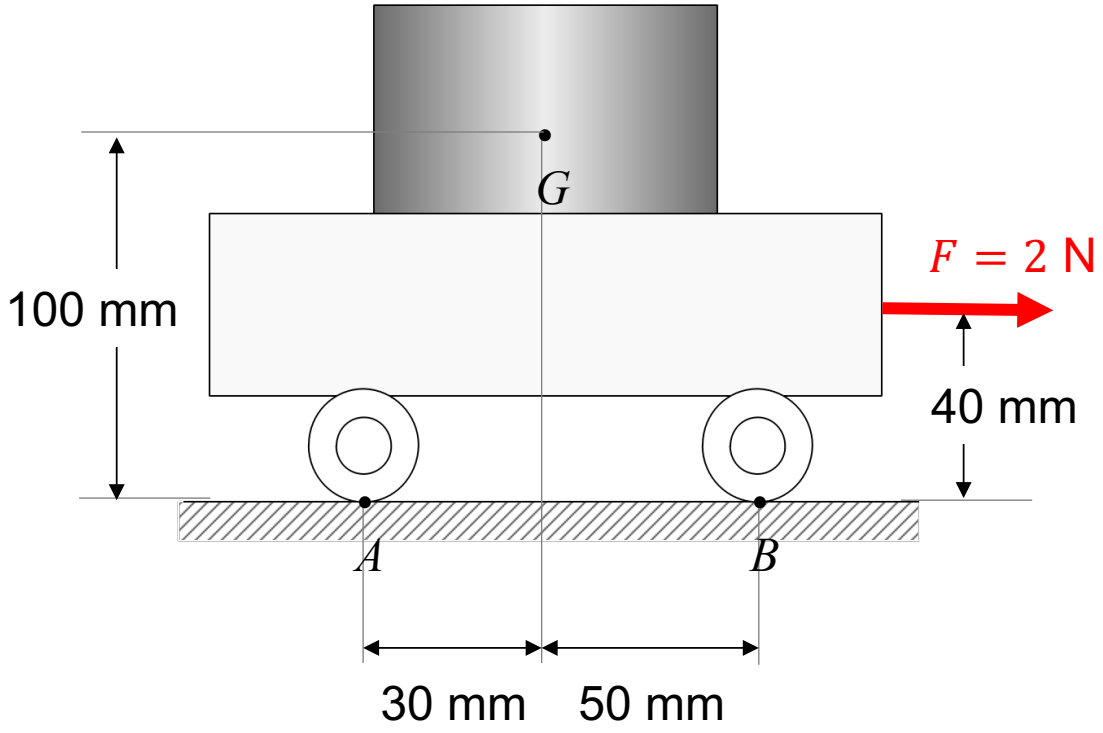
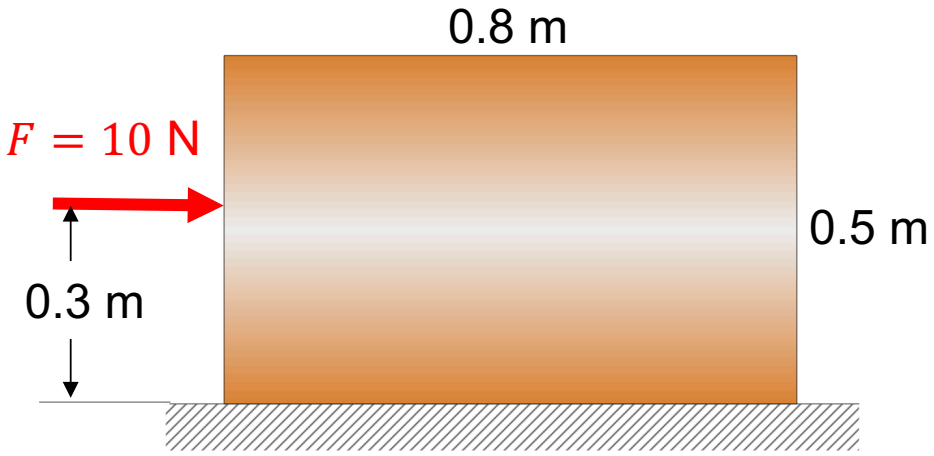
Question 1 – Translation



A cart with its load has a mass of 0.8 kg and a centre of mass at *G*. It is being pulled by a force of 2 N as shown. Determine the acceleration of the cart, as well as the normal forces at the pair of wheels at *A* and *B*, respectively. Assume that the wheels are free to roll and have negligible mass.

Question 2 – Translation



If a 10 N force is applied to a 20 kg uniform crate as shown, determine the linear acceleration of this crate. The coefficient of kinetic friction between the crate and the surface is $\mu_k = 0.2$.