

Answer on Question #47858, Physics, Mechanics | Kinematics | Dynamics

A 2 kg block is on 5 kg block. The system of blocks falls freely due to gravity. The net force on 5 kg block is :

(Take $g = 10 \text{ m/s}^2$)

(1) Zero (2) 50 N (3) 70 N (4) 20 N

Solution:

For a free falling object, the net external force is just the weight of the object:

$$F_{net} = W = mg$$

$$F_{net} = 5 * 10 = 50 \text{ N}$$

Answer: (2) 50 N