

Answer on Question#41011, Physics, Mechanics Question: An 8.0 kg block is released from rest, $v_1 = 0$ m/s, on a rough incline. The block moves a distance of 1.6 m down the incline, the work done by the weight is closest to: a) +80 J b) +100 J c) +120 J d) -100 J e) -80 J
Solution. Formula for work is

$$A = F \cdot \Delta S$$

where F is force and ΔS is distance. Hence

$$A = mg \cdot \Delta S = 8 \cdot 9.8 \cdot 1.6 \approx 120 \text{ J}$$

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