Name:

Key

Quiz (6)-Sec (7)-Ch(7&8)

S.N:

ID :

Phys 101 (Term 041)-(*F. Enaya*)

Show your steps clearly for full credit.!!

A 2.0 kg block starts from rest on a rough inclined plane that makes an angle of 30 degrees with the horizontal. The coefficient of kinetic friction is 0.20. As the block moves 2.0 m down the plane, find the change in gravitational potential energy of the block.
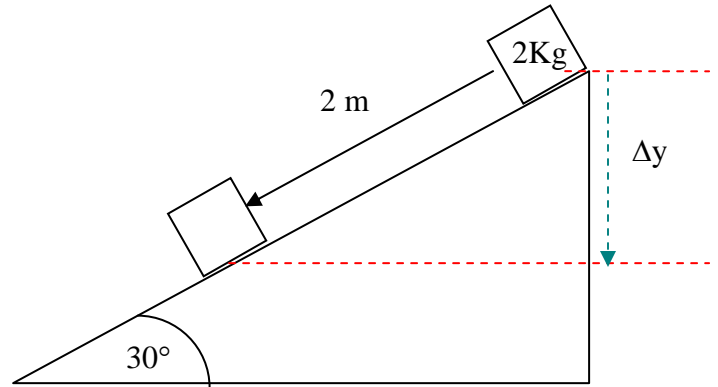
Answer:

$\Delta U_g = m \, g \, (\Delta y)$

from the figure:

Δy (**Down**) = - (2) (sin 30) = - 1 m

ΔU_g = (2) (9.8) (- 1) = - 19.6 J

$$\Delta U_g = -19.6 \, J$$