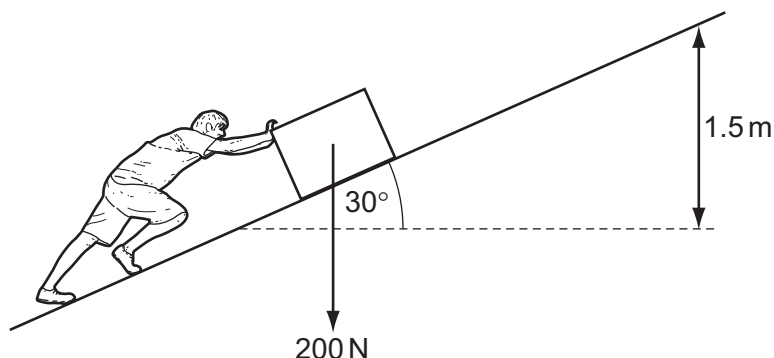


- 14 A box of weight 200 N is pushed so that it moves at a steady speed along a ramp, through a height of 1.5 m. The ramp makes an angle of 30° with the ground. The frictional force on the box is 150 N while the box is moving.



What is the work done by the person?

- A 150 J B 300 J C 450 J D 750 J
- 15 A raindrop of mass m is falling vertically through the air with a steady speed v . The raindrop experiences a retarding force kv due to the air, where k is a constant. The acceleration of free fall is g .

Which expression gives the kinetic energy of the raindrop?

- A $\frac{mg}{k}$ B $\frac{mg^2}{2k^2}$ C $\frac{m^3g^2}{k^2}$ D $\frac{m^3g^2}{2k^2}$

Space for working