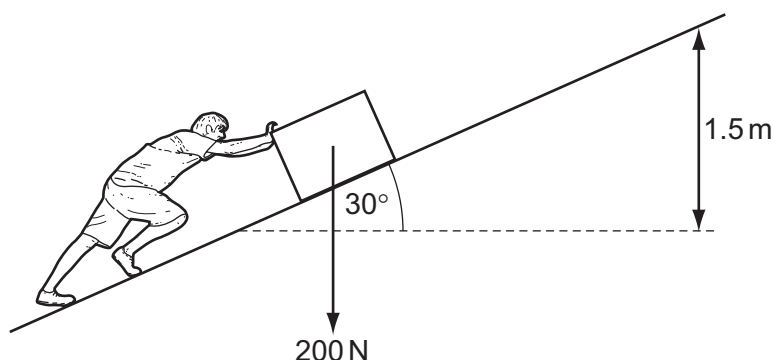


- 14 A box of weight 200 N is pushed so that it moves at a steady speed along a ramp, through a height of 1.5 m. The ramp makes an angle of  $30^\circ$  with the ground. The frictional force on the box is 150 N while the box is moving.



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**