

On a rough horizontal ground, a 3 kg block at rest is moved by a force of 10 N. The acceleration of the block is 2 m s^{-2} .

- (a) Calculate the magnitude of the frictional force exerted on the block.
- (b) If the force ceases to act after 4 s, find
 - (i) the kinetic energy of the block just after the removal of the force.
 - (ii) the further distance travelled by the block before it comes to rest.