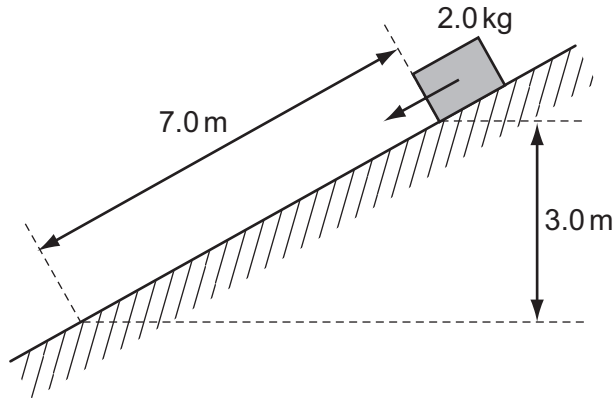


- 15** A block of mass  $2.0\text{ kg}$  is released from rest on a slope. It travels  $7.0\text{ m}$  down the slope and falls a vertical distance of  $3.0\text{ m}$ . The block experiences a frictional force parallel to the slope of  $5.0\text{ N}$ .



What is the speed of the block after falling this distance?

- A**  $4.9\text{ ms}^{-1}$       **B**  $6.6\text{ ms}^{-1}$       **C**  $8.6\text{ ms}^{-1}$       **D**  $10.1\text{ ms}^{-1}$

- 16** A man has a mass of  $80\text{ kg}$ . He ties himself to one end of a rope which passes over a single fixed