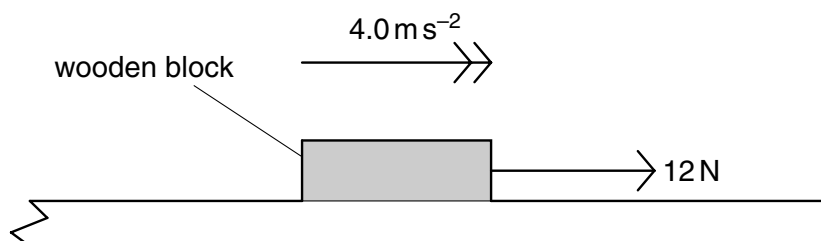


- 10 A wooden block of mass 0.60 kg is on a rough horizontal surface. A force of 12 N is applied to the block and it accelerates at 4.0 m s^{-2} .



What is the magnitude of the frictional force acting on the block?

- A 2.4 N
B 9.6 N
C 14 N
D 16 N
- 11 A body, initially at rest, explodes into two masses M_1 and M_2 that move apart with speeds v_1 and v_2 respectively.

What is the ratio $\frac{v_1}{v_2}$?

- A $\frac{M_1}{M_2}$ B $\frac{M_2}{M_1}$ C $\left(\frac{M_1}{M_2}\right)^{\frac{1}{2}}$ D $\left(\frac{M_2}{M_1}\right)^{\frac{1}{2}}$

- 12 A submarine descends vertically at constant velocity. The three forces acting on the submarine are viscous drag, upthrust and weight.

Which relationship between their magnitudes is correct?

- A weight $<$ drag
B weight $=$ drag
C weight $<$ upthrust
D weight $>$ upthrust