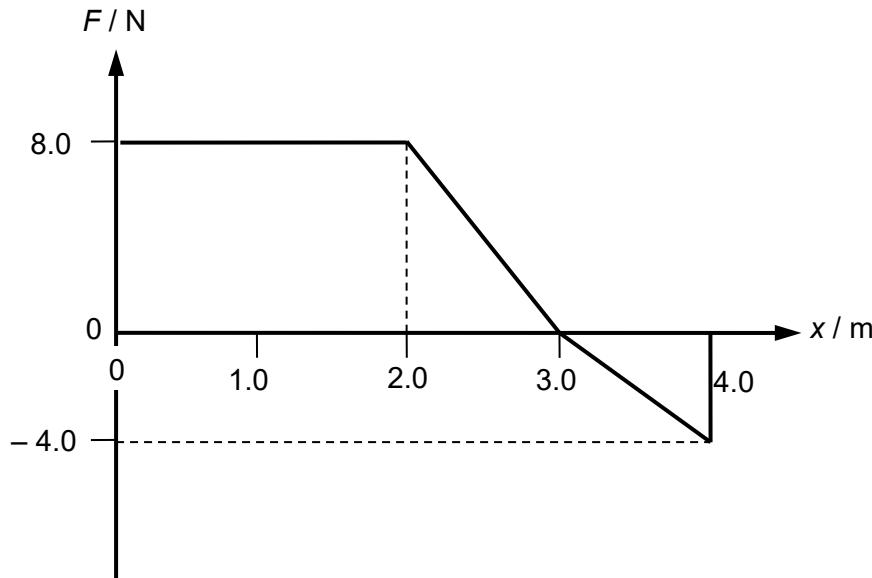


- 6 A body of mass 2.0 kg is acted on by a net force F which varies with displacement x as shown.



The velocity of the body before the net force is applied is 2.5 m s^{-1} .

What is the final velocity of the body at $x = 4.0 \text{ m}$?

A 4.2 m s^{-1}

B 4.9 m s^{-1}

C 5.3 m s^{-1}

D 12 m s^{-1}

- 7 A car of mass m has an instantaneous forward acceleration a when it is moving with