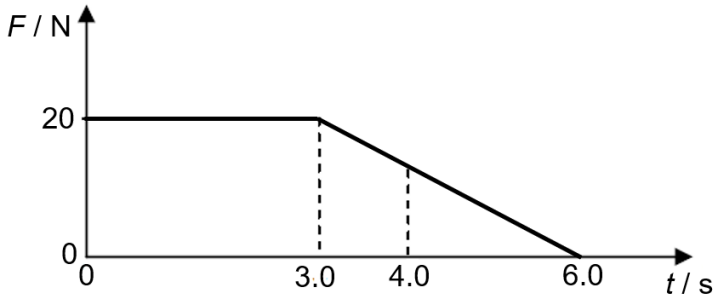
3 An object of mass 20 kg moves along a straight line on a smooth horizontal surface. A force F acts on the object in its direction of motion. A graph of F against time t is shown below.



If the velocity of the object at t = 4.0 s is 4.0 m s^{-1}, what is its velocity at t = 6.0 s?

A 3.0 m s^{-1} **B** 3.3 m s^{-1} **C** 4.7 m s^{-1} **D** 5.0 m s^{-1}