12 A particle P moves in a straight line such that, t seconds after passing through a fixed point O, its acceleration, a ms^{-2}, is given by $a = -6$. When $t = 0$, the velocity of P is 18 ms^{-1}.

(a) Find the time at which P comes to instantaneous rest. [3]

(b) Find the distance travelled by P in the 3rd second. [3]