4 A particle P is moving along a straight line which passes through the point O.
At time $t = 0$ the particle P is at the point O.

At time t seconds the velocity, $v\,$m/s, of P is given by $v = 3t^2 + 2t + 5$

(a) Find the acceleration of P when $t = 2$

(3)

(b) Find the displacement of P from O when $t = 3$

(3)

Question 4 continued

(Total for Question 4 is 6 marks)