6. A particle P is moving with constant acceleration.

At time $t = 1$ second, P has velocity $(-\mathbf{i} + 4\mathbf{j})\,\mathrm{m\,s^{-1}}$

At time $t = 4$ seconds, P has velocity $(5\mathbf{i} - 8\mathbf{j})\,\mathrm{m\,s^{-1}}$

Find the speed of P at time $t = 3.5$ seconds.

(6)

Leave blank

Question 6 continued

(Total 6 marks)

Q6