

Leave  
blank

6. A particle  $P$  is moving with constant acceleration.

At time  $t = 1$  second,  $P$  has velocity  $(-i + 4j) \text{ ms}^{-1}$

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

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

(6)

**DO NOT WRITE IN THIS AREA**

**DO NOT WRITE IN THIS AREA**

**DO NOT WRITE IN THIS AREA**



Leave  
blank**Question 6 continued**

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

**Q6****(Total 6 marks)**

P 7 1 4 0 3 A 0 1 9 2 8