Leave blank

3. A particle P of mass 0.5 kg is moving with velocity $\lambda(\mathbf{i} + \mathbf{j})\,\text{m s}^{-1}$ when P receives an impulse of magnitude $\sqrt{\frac{5}{2}}\,\text{N s}$

Immediately after P receives the impulse, the velocity of P is $4\mathbf{i}\,\text{m s}^{-1}$
Given that λ is a constant, find the two possible values of λ

(6)

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

Leave blank

Question 3 continued

Q3

(Total 6 marks)