

7	(a)	$\mathbf{v} = (7\mathbf{i} + 6\mathbf{j}) + 3(-4\mathbf{i} + 2\mathbf{j})$ $\mathbf{v} = -5\mathbf{i} + 12\mathbf{j}$ $ \mathbf{v} ^2 = -5\mathbf{i} + 12\mathbf{j} ^2 = (-5)^2 + 12^2$ Speed = 13 (m s ⁻¹)	M1* A1 M1dep* A1 [4]	3.3 1.1 1.1 1.1	Applies $\mathbf{v} = \mathbf{u} + \mathbf{a}t$ Attempts speed or speed squared If both $-5\mathbf{i} + 12\mathbf{j}$ and 13 stated as the answer, then A0	Or complete method via integration
7	(b)	$\mathbf{s} = 3(7\mathbf{i} + 6\mathbf{j}) + \frac{1}{2}(-4\mathbf{i} + 2\mathbf{j})(3)^2$ $= 3\mathbf{i} + 27\mathbf{j}(\text{m})$	M1 A1 [2]	3.3 1.1	Applies $\mathbf{s} = \mathbf{u}t + \frac{1}{2}\mathbf{a}t^2$ ISW (e.g. if finding modulus as well)	Or other complete <i>suvat</i> /integration method with their \mathbf{v}