

Section 1: Motion in two dimensions

Crucial points

- 1. Make sure that you are confident with vectors and vector notation Vectors in two dimensions are covered in AS / Year 1 Maths, and you will also have met them at GCSE.
- 2. Remember that any constants of integration will be vectors and so will have two components In the Notes and examples the constant of integration is dealt with by treating the i and j components completely separately. Alternatively you can write the constant of integration as a column vector.
- 3. Make sure that you know when to differentiate and when to integrate

This is a very common error. If you remember the definitions of velocity and acceleration, this shouldn't be a problem. The diagram below summarises the situation.

| position —— | → velocity | → acceleration |
|-------------|---------------|----------------|
| | | |
| | differentiate | |
| position | velocity | acceleration |
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