**Parametric Equations**

|  |  |
| --- | --- |
| The smaller part  Be able to find a Cartesian equation / eliminate the third variable (or find an implicit equation). | The bigger part  Be able to differentiate,  find (usually in terms of *t*). |

Simpler examples such as…

|  |  |
| --- | --- |
|  |  |

Harder examples such as…

|  |  |
| --- | --- |
|  |  |

|  |  |
| --- | --- |
|  |  |

Note that…

|  |  |
| --- | --- |
|  | is an implicit function |
|  | is an explicit function |

|  |  |
| --- | --- |
|  |  |

**Rearrangements of Examples**

The Simpler Example

|  |  |
| --- | --- |
|  |  |

Harder Example 1:

|  |  |
| --- | --- |
|  |  |

Harder Example 2:

|  |  |
| --- | --- |
|  |  |

**Differentiation of Examples**

**E.g. 1**

|  |  |
| --- | --- |
|  |  |

And therefore…

**E.g.2**

|  |  |
| --- | --- |
|  |  |

And therefore…

**E.g.3**

|  |  |
| --- | --- |
|  |  |

And therefore…

Which rearranges to…