**Conic Sections**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Name | Graph | Equation | Eccentricity | Focus | Directrix | Other Notes |
| Circle | Screen Shot 2014-01-10 at 08.06.43.png |  |  |  |  |  |
| Ellipse | Screen Shot 2014-01-10 at 08.07.01.png |  |  |  |  |  |
| Parabola | Screen Shot 2014-01-10 at 08.07.19.png |  |  |  |  |  |
| Hyperbola | Screen Shot 2014-01-10 at 08.07.10.png |  |  |  |  | Asymptotes given by |
| Rectangular  Hyperbola | Screen Shot 2014-01-11 at 17.04.04.png |  |  |  |  | Asymptotes , |

**Transformations of the Standard Conic Equations**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Standard Equation | Translation | Reflection in | Stretch horizontal scale factor *p* | Stretch vertical scale factor *q* |
| Circle |  |  | Equation remains same | Transforms into an ellipse | Transforms into an ellipse |
| Ellipse |  |  |  |  |  |
| Parabola |  |  |  |  |  |
| Hyperbola |  |  |  |  |  |
| Rectangular  Hyperbola |  |  | Equation remains same |  |  |

**AQA FP1 Conic Topics Covered**

6A – Page 77-80.

Intersection of a line and a parabola

6B – Page 80-82.

Transformations of a parabola; translation, reflection in y=x, horizontal stretch, vertical stretch

6C – Page 82-86.

Intro to the ellipse as a stretched circle

Intersection of a line and an ellipse

Transformations of an ellipse; translation, reflection in y=x, horizontal stretch, vertical stretch

6D – Page 87-90.

Intro to the hyperbola

Intersection of a line and an hyperbola

Transformations of an ellipse; translation, reflection in y=x, horizontal stretch, vertical stretch

6E – Page 91-94.

Intro to the rectangular hyperbola as a special hyperbola

Intersection of a line and a rectangular hyperbola

Transformations of an ellipse; translation, reflection in y=x, horizontal stretch, vertical stretch