

ELLIPSE

$$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1 \quad a^2 = b^2 + c^2$$

Semi-major axis = a

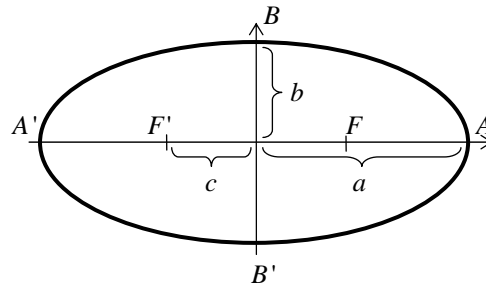
Semi-minor axis = b

Semi focal distance = c

Eccentricity $e = \frac{c}{a}, e < 1$

Vertices $A'(-a, 0), A(a, 0), B'(0, -b), B(0, b)$

Foci $F'(-c, 0), F(c, 0)$



HYPERBOLA

$$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1 \quad c^2 = a^2 + b^2$$

Semi axis = a

Semi focal distance = c

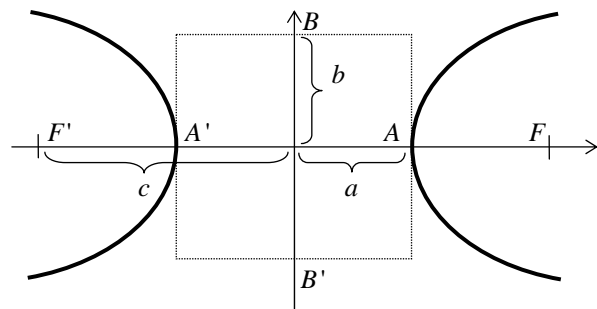
Eccentricity: $e = \frac{c}{a}, e > 1$

Real vertices $A'(-a, 0), A(a, 0)$

Imaginary vertices $B'(0, -b), B(0, b)$

Foci: $F'(-c, 0), F(c, 0)$

Asymptotes: $y = \pm \frac{b}{a}x$



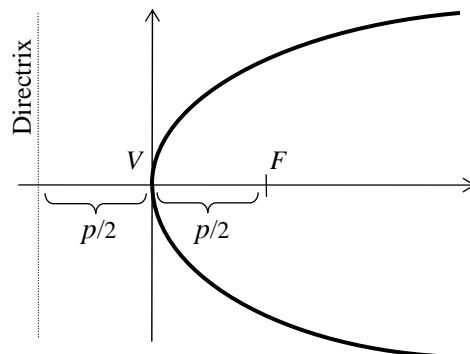
PARABOLA

$$y^2 = 2px$$

Vertex: $V(0, 0)$

Directrix $x = -\frac{p}{2}$

Focus $F\left(\frac{p}{2}, 0\right)$



Vertex-focus distance = $p/2$

Vertex-directrix distance = $p/2$

Featured software

Distillation simulator	www.vaxasoftware.com/soft_eduen/sden.html
FunGraph - Graphs of mathematical functions	www.vaxasoftware.com/soft_eduen/fungraph.html
Design of distillation columns by McCabe-Thiele method	www.vaxasoftware.com/soft_eduen/mcth.html
Worksheets Generators for Maths and Chemistry	www.vaxasoftware.com/pc/index.html
Acid-base equilibrium calculator	www.vaxasoftware.com/soft_eduen/abew.html
Statistics and Probability tools for Windows	www.vaxasoftware.com/soft_eduen/statool.html
