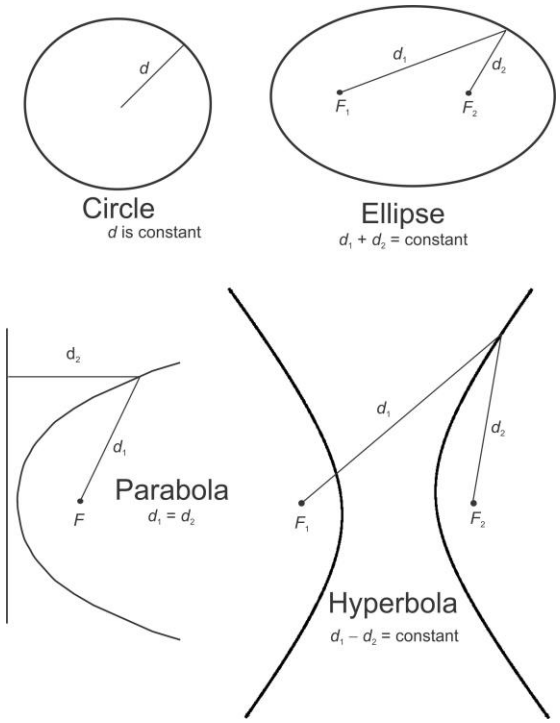

Conic Section	**General Form**
Circle	$x^2 + y^2 = r^2$
Parabola (smiling)	$x^2 - 2py = 0$
Ellipse	$\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$
Hyperbola	$\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$

Given the general quadratic: $ax^2 + bx + cy^2 + dy + k = 0$

The Conics and the General Quadratic	
Conditions on *a* and *c*	**then curve is a(n)**
If *a* and *c* have the same sign,	ellipse
If *a* and *c* have the same sign and $a = c$,	circle
If *a* and *c* have the opposite signs,	hyperbola
If *a* and *c* have the opposite signs and $a = c$,	equilateral hyperbola
If $a = 0$ or $c = 0$ (XOR).	parabola