Eccentricity

A conic section can be described as the locus of a point P whose distance PS from a fixed point S is in some fixed ratio e to its perpendicular distance PN from a fixed line.

The point S is called the *focus* of the conic, the fixed line is called the *directrix* of the conic, and the fixed ratio e is called the *eccentricity* of the conic.

Type of conic	Eccentricity
circle	$e = 0$
ellipse (not circle)	$0 < e < 1$
parabola	$e = 1$
hyperbola	$e > 1$

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