

## 10.5: Elements of a Parabolic Orbit

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The eccentricity, of course, is unity, so only five elements are necessary. In place of the semi major axis, one usually specifies the parabola by the perihelion distance  $q$ . Presumably no orbit is ever exactly parabolic, which implies an eccentricity of exactly one. However, many long-distance comets move in large and eccentric orbits, and we see them over such a short arc near to perihelion that it is not possible to calculate accurate elliptic orbits, and we usually then fit a parabolic orbit to the observations.

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