

***Parabolic Mirrors, Elliptic and Hyperbolic Lenses***  
***Mohsen Maesumi***

*The American Mathematical Monthly*, June–July 1992, Volume 99, Number 6,  
pp. 558–560.

***Excerpt***

The functioning of parabolic mirrors and antennas are based on one of the many wonderful properties of conic sections. It is well known that if a mirror is in the shape of a conic and a beam of light emanates from one of its focuses and is reflected by the mirror, then the reflected beam (or its extension) passes through the second focus. For a parabola one focus is at infinity, hence a beam of light that is parallel to the axis of parabola will be focused at the (finite) focus.