1077-VJ-2717   **Sam Northshield*** (`northssw@plattsburgh.edu`). *Geometry of cubics.* Preliminary report.

The roots of a cubic polynomial form a triangle T in the complex plane. There is an equilateral triangle in 3-space that projects onto T, and this projection induces a linear map taking the cube roots of unity to the roots of the polynomial. This leads to a short new proof of Marden's theorem: the roots of a complex polynomial are the foci of the ellipse of maximum area inscribed in T. Time permitting, we give a related proof of Cardano's formula. (Received September 22, 2011)