1035-X1-301   **Benjamin V.C. Collins*** (`collinbe@uwplatt.edu`), 1 University Plaza, Platteville, WI 53818. *Al-Samaw'al and Division of Polynomials.*

Present-day mathematics students would hesitate to divide $20x^6 + 2x^5 + 58x^4 + 75x^3 + 125x^2 + 196x + 94 + 40x^{-1} + 50x^{-2} + 90x^{-3} + 20x^{-4}$ by $2x^3 + 5x + 5 + 10x^{-1}$. Yet eleventh century Islamic mathematician al-Samaw'al ben Yahyā ben Yahūdā al-Maghribī performed this division smoothly, without the benefit of modern notation or symbolic representation. In cases where the polynomials do not divide evenly, al-Samaw'al was even able to indicate an infinite series representation for the quotient. We will take a look at al-Samaw'al's method, and see how it might be introduced in a College Algebra course to supplement (or replace) current methods of polynomial division. (Received August 31, 2007)