

1125-VW-1190      **Ricardo E Rojas\*** ([ricardo.rojas@northern.edu](mailto:ricardo.rojas@northern.edu)), 1200 South Jay Street, Aberdeen, SD  
57401. *Factoring Quadratics: The Bijection That Lies Beneath.*

We can factor a quadratic polynomial with integer coefficients if and only if it has a discriminant that is a perfect square; furthermore, if such a factorization exists, then it is, essentially, unique. This leads us to a bijection from ordered pairs of linear polynomials with integer coefficients to quadratic polynomials with integer coefficients that we can factor. This bijection is multiplication; its inverse is factorization. To my knowledge, this inverse bijection of factorization has never been explicitly written down and presented as the function that it is; this presentation, aimed at both math education majors and 7-12 math teachers, shall do just that. (Received September 15, 2016)