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Amanda Lee Coe* (acoe2@elon.edu), 7624 Campus Box, Elon, NC 27244. *Pascal's Triangle in Higher Dimensions.*

Geometric displays of binomial coefficients are famously seen in Pascal's Triangle. This display has been extended by Hilton to include trinomials. There are many patterns in Pascal's Triangle, including the Star of David Theorem. Unique to this paper are displays of 4-nomial coefficients and patterns in \mathbb{Z}_p , for p a prime, in 4-nomials, and an extension of the Star of David Theorem for trinomial coefficients. (Received July 29, 2011)