

## A Note on an American Mathematical Monthly Note

In the Feb. 2011 issue of the *American Mathematical Monthly*, pp. 175-177, there is a probabilistic proof (by G. Chang and C. Xu) of the identity  $\sum_{i=0}^n \binom{2i}{i} \binom{2n-2i}{n-i} = 4^n$ , and of a generalization. This, and the generalization, follow by extracting the coefficient of  $x^n$  in  $((1-4x)^{-1/2})^2 = (1-4x)^{-1}$  and  $((1-4x)^{-1/2})^m = (1-4x)^{-m/2}$  respectively.  $\square$

Doron Zeilberger, <http://www.math.rutgers.edu/~zeilberg/>, Feb. 11, 2011. (Exclusively published in <http://www.math.rutgers.edu/~zeilberg/pj.html> (Personal J. of S.B. Ekhad and D. Zeilberger) .)