The Binomial Theorem
CSE 1400 Applied Discrete Mathematics
Spring 2013

The purpose of this exercise is to test your understanding of the binomial theorem.

1. Use the binomial theorem to show the sum of row $n$ in Pascal’s triangle is equal to $2^n$. That is,

$$2^n = \sum_{k=0}^{n} 2 \binom{n}{k}$$

2. Why are $11^2$, $11^3$, and $11^4$ easy to compute for someone who knows the binomial theorem?