

$$\sum_{k=1}^n (2k-1) \binom{n}{k} = 2^n (n-1) + 2^n$$

$$\sum_{k=1}^n k \binom{n}{k} = n \cdot 2^{n-1}$$

$$\sum_{k=1}^n k^2 \binom{n}{k} = n(n+1) \cdot 2^{n-2}$$

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

end - sent