

Hint for Problem 407

The EGF for $\sum_{i=1}^n \binom{n}{i} k$ is $\sum_{n=1}^{\infty} \sum_{i=1}^n \frac{n!}{k!(n-k)!} k \frac{x^n}{n!}$. You can cancel out the $n!$ terms and the k terms. Now try to see if what is left can be regarded as the product of two EGFs.