

Combinatorics. Quiz 3. Name _____ Time _____

Show all work for full or partial credit. Put a box around your final answer in each part. Try the problem on your own before helping each other understand it.

1. What is the coefficient of x^4y^{11} in the expansion of $(2x - 3y)^{15}$?

2. What is the coefficient of $x^4y^{11}z^3$ in the expansion of $(2x - 3y + z)^{18}$?

3. Find the value of the following sum:

$$\sum_{k=0}^{73} \binom{n}{k} (-2)^k$$



4.