

1. How many 5-card hands (from a 52-card deck) with 1 spade, 2 hearts, and 2 others from remaining suits can be dealt?
(suits: spades, clubs, hearts, diamonds)
2. How many ways can 3 marbles be selected from a bag containing 4 green and 5 red marbles if all marbles must be the same color?
3. The first three terms of $(x-y)^{22}$ are $x^{22} - 22x^{21}y + 231x^{20}y^2$. Write the last three terms.

Use the Binomial Theorem for #4 and #5.

4. Find the eighth term of $(2x-3)^{15}$.
5. Write the first four terms of $(1+2x)^{16}$.