

Pascal's Triangle

row 0

1

row 1

1 1

row 2

1 2 1

row 3

1 3 3 1

row 4

1 4 6 4 1

row 5

5C_0 1 5C_1 5 5C_2 10 5C_3 10 5C_4 5 5C_5 1

$nC_r = n$ choose r = combination

order doesn't matter

Binomial Theorem

$${}^5C_2 = \frac{5!}{2!3!}$$

$$nC_r = \frac{n!}{(n-r)!r!}$$