C12 - 11.10 - Pascal's Triangle

$; (a+b)^n$

Pascal's triangle with numbers and with $_nC_r$'s.

Sum:

Row 1	1	$n = 0$ $2^0 = 1$

The sum of the row is equal to 2^n

Row 2   1   1 $n = 1$ $2^1 = 2$

$sum = 2^n$

Row 3   1   2   1 $n = 2$ $2^2 = 4$

$sum = 2^{row\# - 1}$

Row 4   1   3   3   1 $n = 3$ $2^3 = 8$

Row 5   1   4   6   4   1 $n = 4$ $2^4 = 16$

$_4C_3$

$r = 0$ $r = 1$

2nd # in row is n # = nC1

$_0C_0$

$_1C_0$ $_1C_1$

$_2C_0$ $_2C_1$ $_2C_2$

$_3C_0$ $_3C_1$ $_3C_2$ $_3C_3$

$_4C_0$ $_4C_1$ $_4C_2$ $_4C_3$ $_4C_4$