

Pascals Triangle Calculations

This resource was written by Derek Smith with the support of CASIO New Zealand. It may be freely distributed but remains the intellectual property of the author and CASIO.

Select PRGM mode from the main menu by using the arrow keys to highlight the PRGM icon or pressing the $\boxed{\log}$ key.

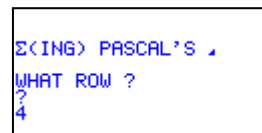
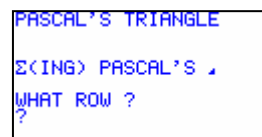


Combinations - ${}^n C_r$

This programme generates Pascals triangle numbers down to the n^{th} row.

```
"PASCAL'S TRIANGLE".
"Σ(ING) PASCAL'S "
"WHAT ROW ?"
? → A
0 → B
0 → C
0 → D
0 → E
0 → F
Lbl 1
D=A+1 => Goto 2
A C D → F
F
F+C → E
E → C
D+1 → D
Goto 1
Lbl 2
```

Example: To calculate the 4th row begin the programme to get the following on the screen, then enter in 4, press EXE, each time you press the EXE key the next term will be displayed.



Pascals triangle numbers are used for:

1. Binomial co-efficients in expanding polynomials e.g. $(x + 4)^7$
2. Probability calculations e.g. Binomial distribution and Combination theory.