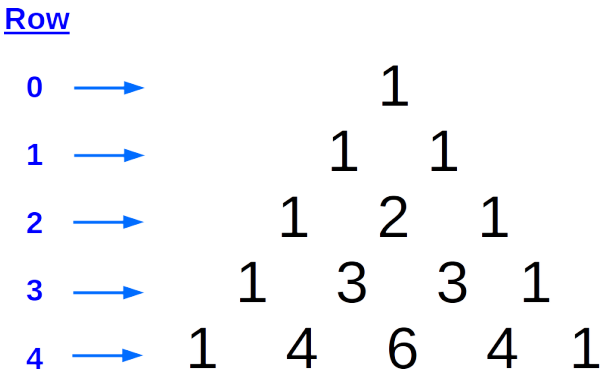
Pascal's Traingle

Write an LC3 program to print a row in Pascal's triangle. A Pascal's triangle is an array that consists of binomial coefficients and the figure below shows the first five rows of Pascal's triangle.



We refer the *kth* binomial coefficient in *nth* row by ${}^{n}C_{k}$ and the coefficient can be computed by following formula :

$${}^{n}C_{k} = n!/(k!(n-k)!)$$

Details:

- Assume that the row number is provided in register R1.
- Write code in the file pascal.asm
- You must write subroutines FACTORIAL, DIVISION, MULTIPLICATION to get partial credit.
- To print the values use the PRINT_DECIMAL subroutine you have developed in lab2b