Powers of a binomial

Write a program to compute the powers of a binomial $(ax + by)^n$ where x and y are the binomial independent variables, a and b are real coefficients and n is a positive integer.

The program must read from a file named "*powers.txt*" the following information.

- The first row of the file contains the values of a and b, separated by a white space.
- The following rows contain, one per row, different values for n

For each value of n in the input file, the program must print the expression of the polynomial corresponding to the n-th power of the binomial.

To compute the polynomial coefficients, write a function `pascalTriangle(n)` that computes the Pascal's triangle up to order n, represented as a list of lists.

For example, with $n = 4$, the Pascal's triangle is

$$\begin{array}{ccccccccc} & & & & 1 & & & & \\ & & & 1 & & 1 & & & \\ & & 1 & & 2 & & 1 & & \\ & 1 & & 3 & & 3 & & 1 & \\ 1 & & 4 & & 6 & & 4 & & 1 \end{array}$$

which should be represented as

```
[
    [1],
    [1, 1],
    [1, 2, 1],
    [1, 3, 3, 1],
    [1, 4, 6, 4, 1],
]
```

Example

Given the following "*powers.txt*" file

```
1 -2
3
5
```

the program should produce as output:

```
Powers of (1.0x - 2.0y)^N
N = 3
1.0 x^3 - 6.0 x^2 y + 12.0 x y^2 - 8.0 y^3
N = 5
1.0 x^5 - 10.0 x^4 y + 40.0 x^3 y^2 - 80.0 x^2 y^3 + 80.0 x y^4 - 32.0 y^5
```