

**Lab Goal :** This lab was designed to teach you how to use a matrix, an array of arrays.

**Lab Description :** Read in each number from the file and print out a pascal's triangle of that size.

### Sample Data :

6 ← # of data sets in the file - 6

3  
6  
7  
2  
4  
5

### Files Needed ::

PascalsTriangle.java  
PascalsTriangleRunner.java  
triangle.dat

### Sample Output :

```
1
1      1
1      2      1

1
1      1
1      2      1
1      3      3      1
1      4      6      4      1
1      5      10     10     5      1

1
1      1
1      2      1
1      3      3      1
1      4      6      4      1
1      5      10     10     5      1
1      6      15     20     15     6      1

1
1
1      1

1
1      1
1      2      1
1      3      3      1

1
1      1
1      2      1
```

### algorithm help

Basic Pascal's triangle rules are as follows. The first and last values of the row are always 1. The other values in the row are computed using the following formula :

The  $i$ th value in the row =  $(i-1)$ st value of the previous row + the  $i$ th value in the previous row.

For instance, the second value of the 4<sup>th</sup> row is 3 because the 1<sup>st</sup> and 2<sup>nd</sup> values of the 3<sup>rd</sup> row are 2 and 1.

```
//BONUS +30
//OUTPUT EACH TRIANGLE
//AS AN EQUILATERAL TRIANGLE
```

```

      1
     1 1
    1 2 1
   1 3 3 1
  1 4 6 4 1
 1 5 10 10 5 1
```

1	3	3	1	
1	4	6	4	1