Lab Goal: The lab was designed to help you review classes, objects, files, arrays, and matrices.

**Lab Description:** Each number in the file is the size of a pascal's triangle. Take each number and print a pascal's triangle that size.



## Files Needed ::

PascalsTriangle.java Lab01a.java

## **Sample Output:**

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

## algorithm help

The rules for a row with n integer values on it 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 ith value in the row = (i-1)st value of the previous row + the ith 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.

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

```
//BONUS +30

//OUTPUT EACH TRIANGLE

//AS AN EQUILATERAL TRIANGLE

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
           2
1
                      1
1
           3
                      3
                                 1
1
           4
                      6
                                 4
                                            1
1
           5
                                            5
                      10
                                 10
                                                       1
1
           6
                                            15
                                                       6
                      15
                                 20
                                                                   1
                                                                   7
1
           7
                      21
                                 35
                                            35
                                                       21
                                                                              1
1
           8
                      28
                                 56
                                            70
                                                       56
                                                                  28
                                                                              8
```

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1	9	36	84	126	126	84	36	9	1	
1	10	45	120	210	252	210	120	45	10	1