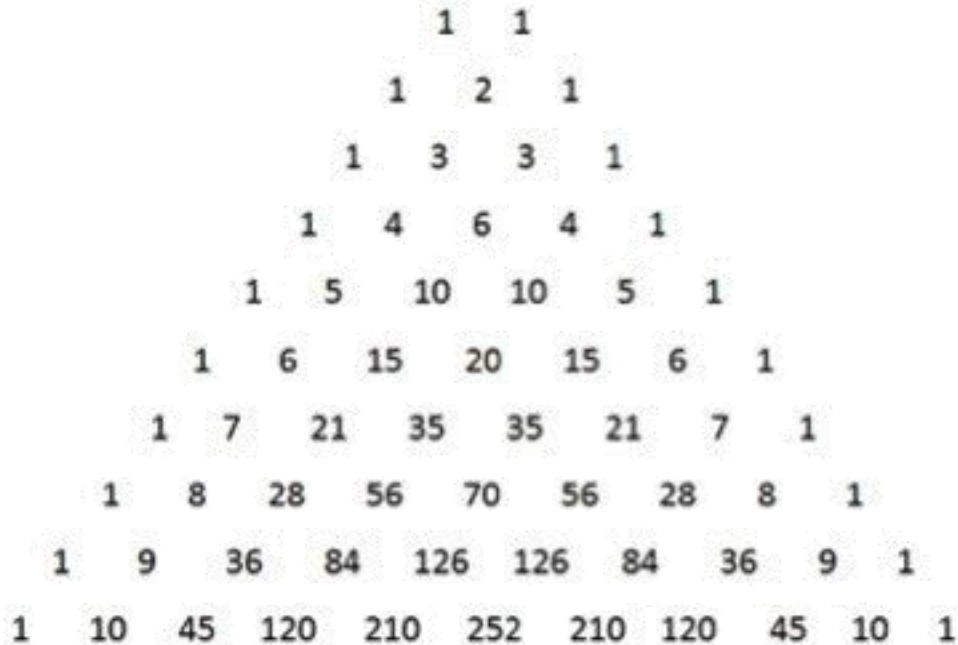


PASCAL'S IDENTITY and PASCAL'S TRIANGLE
COLLECTED HOMEWORK #9 – due Monday, November 21

You may write your answers to #1 in the space provided. However, please write your answers for #2 and #3 on a separate sheet of paper.

1. On the diagram below, the first ten rows of Pascal's Triangle are shown. Fill in the entries of the eleventh and twelfth rows.



2. Use Pascal's Triangle to find the value of each of the following. ALSO, use the combinations formula to check that the triangle gave you the right answer. (Show your work!)

a) $C(7,2)$

b) $C(10,6)$

c) $C(11,4)$

d) $C(12,9)$

3. Re-read the example at the beginning of the Pascal's triangle handout. Give a similar explanation, using selections from a standard deck of cards, to explain why

$$C(52,3) = C(51,2) + C(51,3)$$