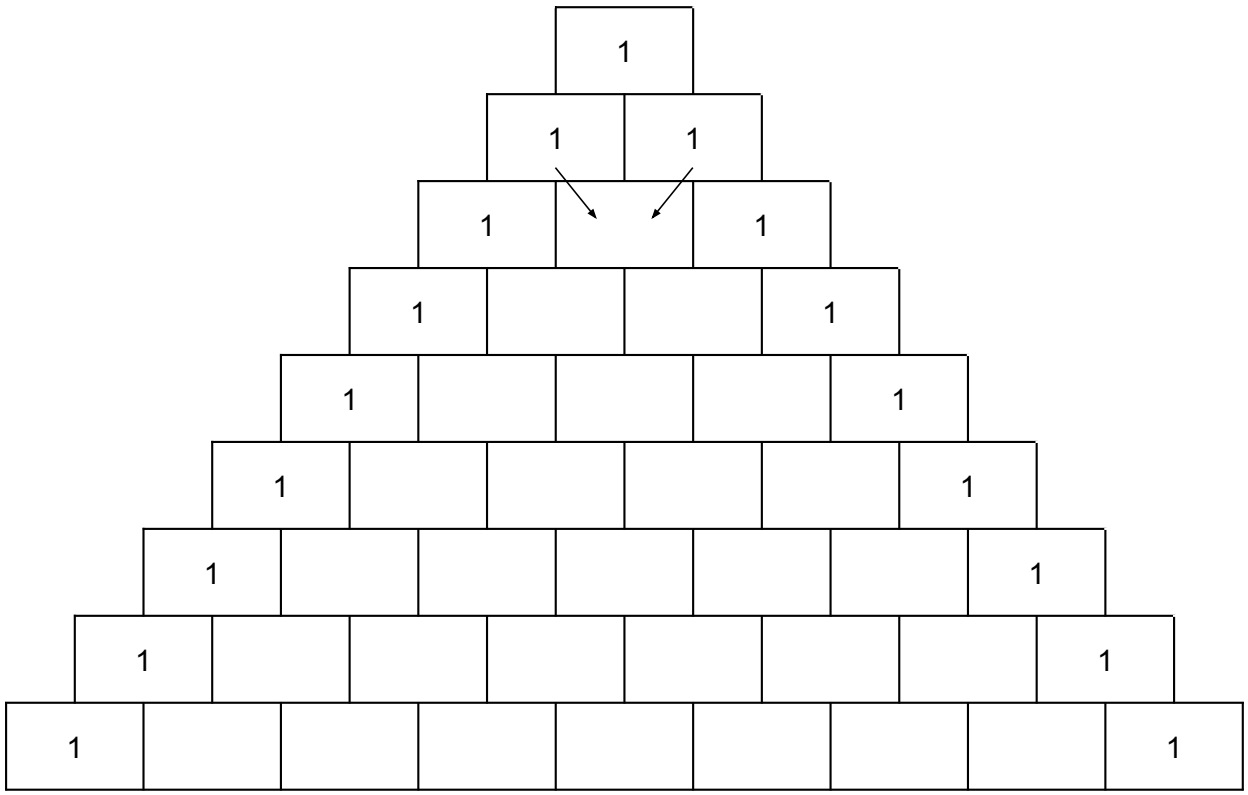
Problem of the Week

Problem A

Numbered Triangle

Diana has outlined the following triangle formed of boxes:



Diana fills in the top box of the triangle with a 1. The first box and last box of the remaining rows of the triangle are filled with a 1. The rest of the boxes in each row are filled with the sum of the numbers in the two boxes in the row above that touch the top side of the box Diana is filling. For example, the middle box of the third row is filled with the sum of the numbers in the two boxes in the second row.

What does the triangle look like after Diana has filled in all of the numbers according to the rules described above?

Can you find any patterns in the finished triangle? Share these patterns with others in your class.

Not printing this page? You can fill in the boxes on our interactive worksheet.