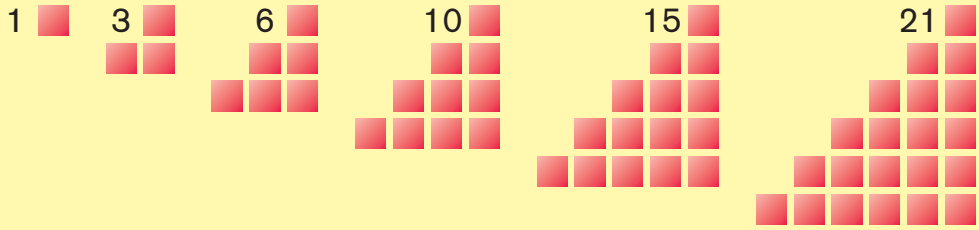
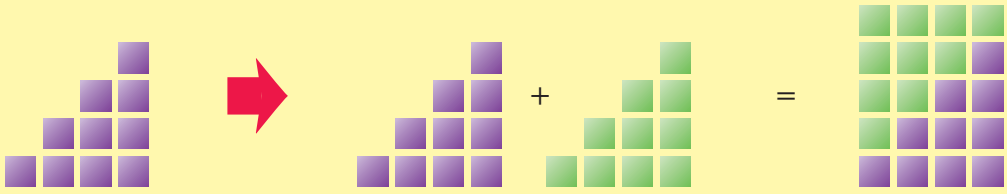
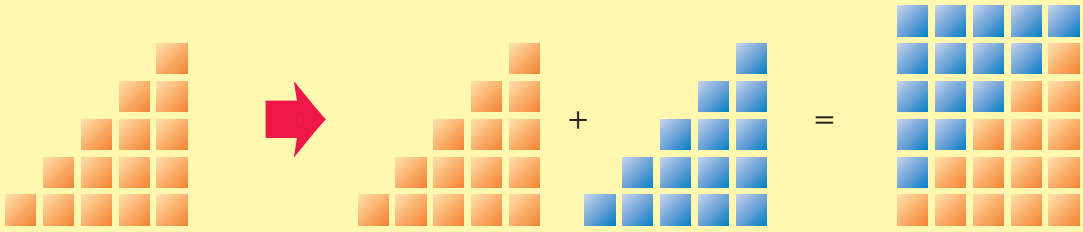
Generalising and creating formulae



Triangle numbers can be represented by a triangular array of squares.

What does this set of diagrams tell you about doubling triangle numbers?





Can you picture $T_{10} + T_{10}$? $T_{60} + T_{60}$? $T_{100} + T_{100}$?

How does this help you find T_{10}, T_{60} and T_{100}?

Have you a strategy for finding any triangle number?

Test out any ideas you have with T_{250} and T_{2045}.

What about T_n?

3655 is a triangle number. Which one is it?

Describe a quick way of finding out.

Consider the following numbers: 4851, 6214, 7626, 8656.

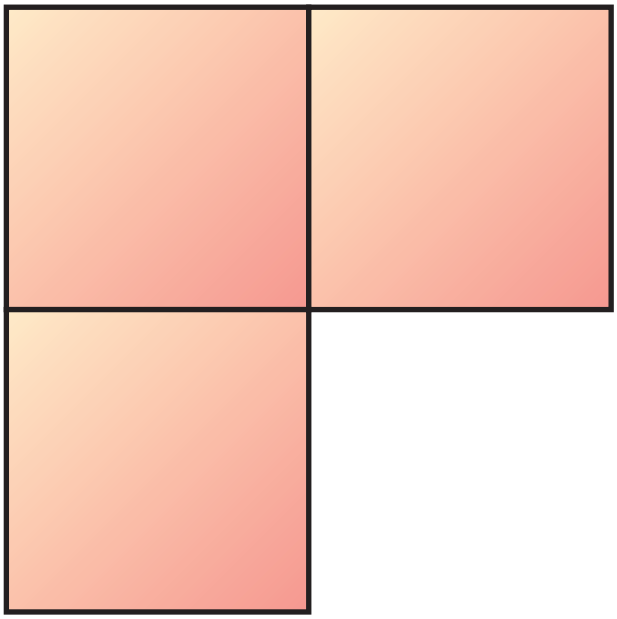
Which are triangle numbers?

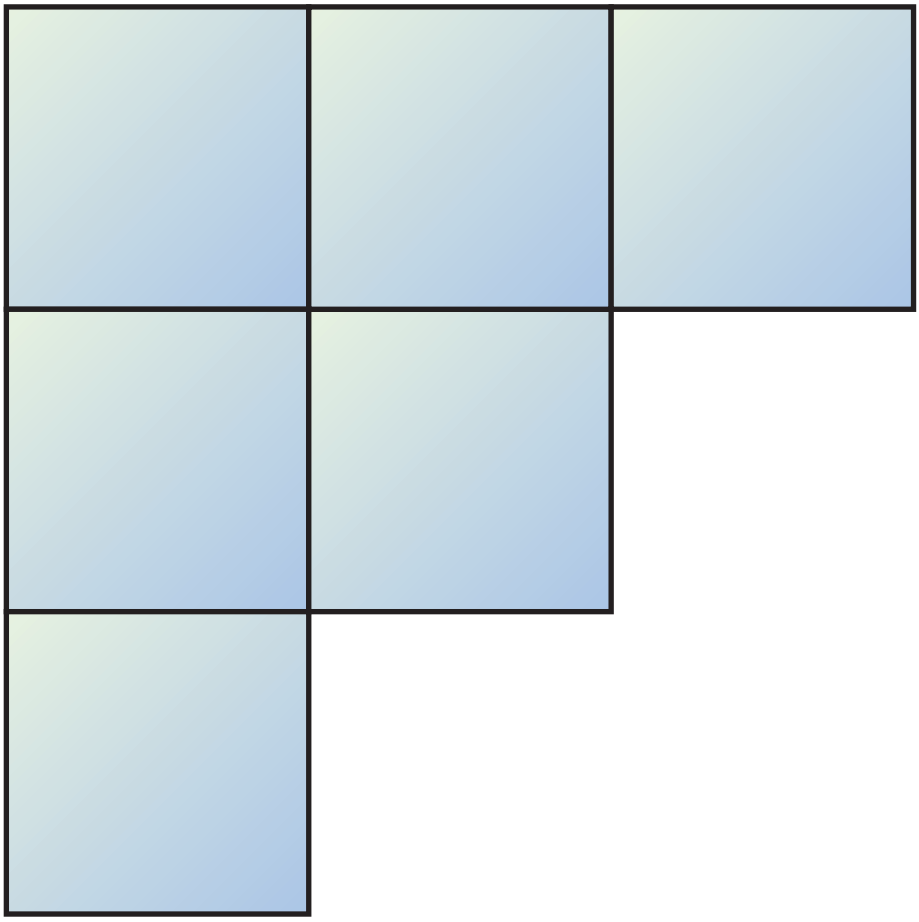
Describe a quick way of deciding.

Sequences and series: triangular arrays 1

Resource sheet

Make two copies on acetate sheets and cut out the arrays.





Sequences and series: triangular arrays 2

Resource sheet

Make two copies on acetate sheets and cut out the arrays.