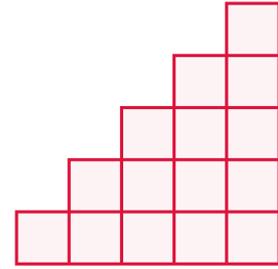
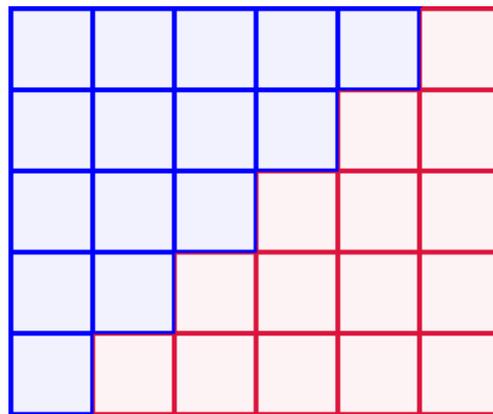


Triangle numbers can be represented by a triangular array of squares.



Imagine two copies of a triangular array of squares. This picture shows how we could fit them together to make a rectangle:



What is special about the dimensions of your rectangle?

Experiment with different triangle numbers and explain what is special about the rectangles made from two identical triangle numbers.

Can you write down the dimensions of the rectangle made from two copies of the 250th triangle number?

Can you use this to work out the 250th triangle number?

*[Check - your answer should be somewhere in this list:
29184, 31375, 586594, 908475, 2092035]*

Deduce a strategy for working out *any* triangle number.

Extension:

Consider the following numbers: 4851,6214,3655,7626,8656.

Which are triangle numbers?

Describe a quick way of deciding.

Do any triangle numbers end 000?