Identification of Patterns in Square and Triangular Numbers

Square numbers

For finding the square of a number we multiply the number by itself. A square number is always positive. The numbers like 4, 9, 25... can be expressed as the product of a number and itself.

$$1 \times 1 = 1^2 = 1$$

 $2 \times 2 = 2^2 = 4$

 $3 \times 3 = 3^2 = 9$

 $4 \times 4 = 4^2 = 16$ and so on.

When you multiply a number by itself, the result is a square number.

Triangular Numbers

Any of the series of numbers obtained by continued summation of the natural numbers.

A number that can make a triangular dot pattern.



By adding another row of dots and counting all the dots we can find the next number of the sequence.

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The first triangle has just 1 dot.

The second triangle has another row with 2 extra dots, making 1 + 2 = 3The third triangle has another row with 3 extra dots, making 1 + 2 + 3 = 6so, the fourth has 1 + 2 + 3 + 4 = 10. And the series goes on, Here 1, 3, 6, 10, 15, ... are called triangular numbers.

These numbers 1, 3, 6, 10, 15, 21... etc. are in triangular shapes.