



## EQUIPATTERN

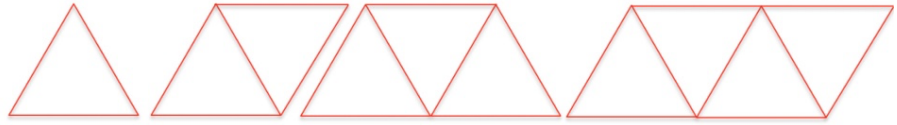
Copy this pattern.

You could use

toothpicks or

paper sticks or

draw the pattern on isometric paper (see page 2).



Make or draw the next 3 patterns in the sequence.

A friend can only see the 1<sup>st</sup> pattern.

How would you explain how to make or draw the next 2 patterns in the sequence?

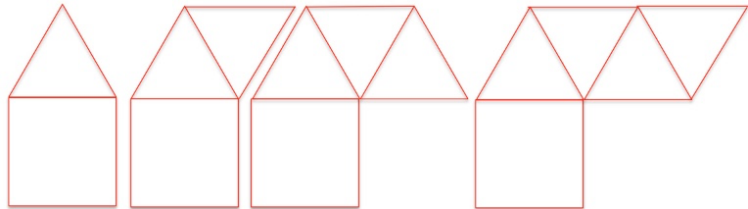
How many sticks would you need to make the 10<sup>th</sup> pattern?

What about the 100<sup>th</sup> pattern? How do you know?

What is the same and what is different about these four patterns?

Write down the numbers of sticks in these four patterns

and also in the next two patterns of the sequence.



What about the 10<sup>th</sup> and 100<sup>th</sup> terms in this sequence?

What about the  $n^{\text{th}}$  term in these sequences?

## HELP

Use sticks and copy the patterns. How many sticks do you add to a pattern to make the next pattern? Draw the patterns on the isometric paper on page 2.

Write a list (sequence) of the number of sticks in each successive pattern.

Describe the pattern in these numbers. Describe in words how the pattern of numbers grows.

This should help you to find the number of sticks when you know the number of the pattern.

## NEXT

Make a different sequence of patterns of your own. Describe how to find the number of sticks in the hundredth pattern.

