


Stick Patterns


1. Answer the questions about this series of pictures.

Picture 1: Here is an array of sticks.




How many sticks are there?

Picture 2: Here is another array of sticks.



How many *more* sticks do you need to make this picture?

Picture 3: Here is the next array.



How many *more* sticks are there than in Picture 2?

Picture 4: What would the next array look like?

How many *more* sticks are there than in Picture 3?

Here is a table to keep track of the number of sticks.

Picture number	Number of sticks added to previous picture	Total number of sticks in the picture
1		
2		
3		
4		
100		
101		

- Continuing the pattern, how many sticks would need to be added to Picture 100 to make Picture 101? Tell how you got your answer.
- Can you describe the pattern of the number of sticks as a function of the picture number? Tell how you got your answer.
- Can you tell how many sticks there are in Picture 100? Tell how you got your answer.