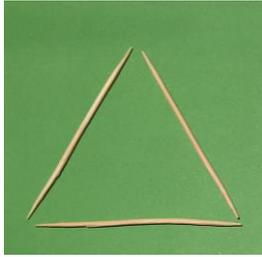


Patterns in shapes

Ask yourself... how many sides does a triangle have?

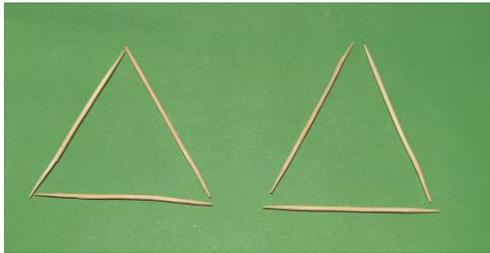
... if we were back at school I would ask how many students to come forward and make a triangle?

FIRST: Using some tooth picks, icy pole sticks or by drawing, can you please make a triangle like mine.



How many sticks did we use?

If we were to make or draw two triangles, how many sticks would I need?



Copy this table into your books

Triangles	1	2	3	4	5
Sticks					

After making 3 triangles, make 4 and then 5

Record how many sticks are used for each triangle

Can you see a pattern? Record the pattern in your book.

QUESTION... How many sticks would be needed to make 10 triangles?

Record your thinking.

Can you see a pattern? If you can – explain it

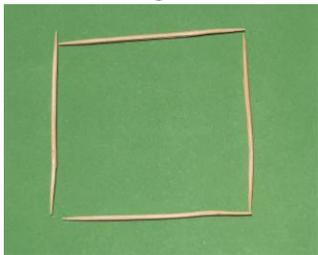
Challenge: How many triangles could you make or draw if you had exactly 38 sticks?

What about a square?

How many sides does a square have?

... if we were back at school I would ask how many students to come forward and make a square?

SECOND: Using some tooth picks, icy pole sticks or by drawing, can you please make a square like mine.



How many sticks did we use?

If we were to make or draw two squares, how many sticks would I need?



Copy this table into your books

Squares	1	2	3	4	5
Sticks					

After making 3 squares, make 4 and then 5

Record how many sticks are used for each square

Can you see a pattern? Record the pattern in your book.

QUESTION... How many sticks would be needed to make 9 squares?

Record your thinking.

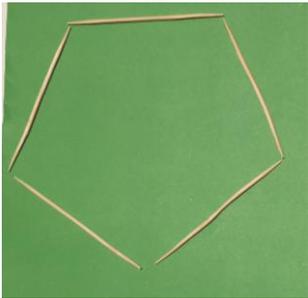
Challenge: How many squares could you make or draw if you had exactly 54 sticks?

What about a pentagon?

How many sides does a pentagon have?

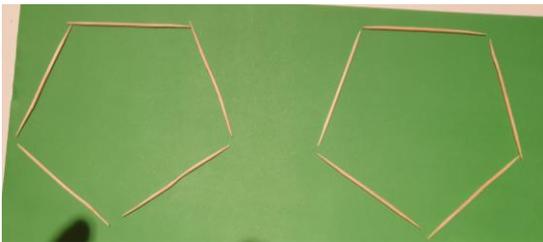
... if we were back at school I would ask how many students to come forward and make a pentagon?

FOURTH: Using some tooth picks, icy pole sticks or by drawing, can you please make a pentagon like mine.



How many sticks did we use?

If we were to make or draw two pentagons, how many sticks would I need?



Copy this table into your books

Pentagons	1	2	3	4	5
Sticks					

After making 3 pentagons, make 4 and then 5

Record how many sticks are used for each pentagon.

Can you see a pattern? Record the pattern in your book.

QUESTION... How many sticks would be needed to make 12 pentagons?

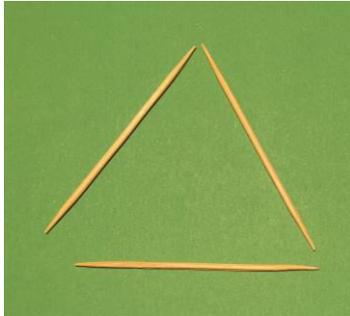
Record your thinking. How do you know?

Challenge: How many pentagons could you make or draw if you had exactly 75 sticks?

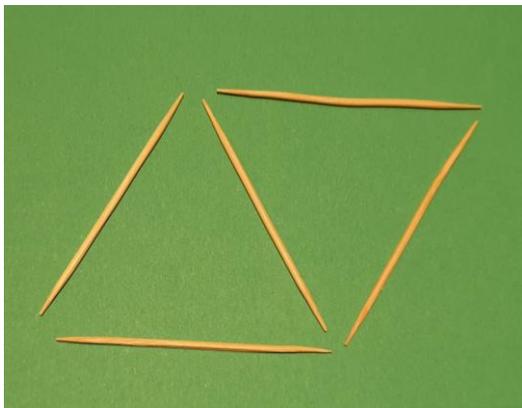
Easy peesy?

Extra Super Challenge

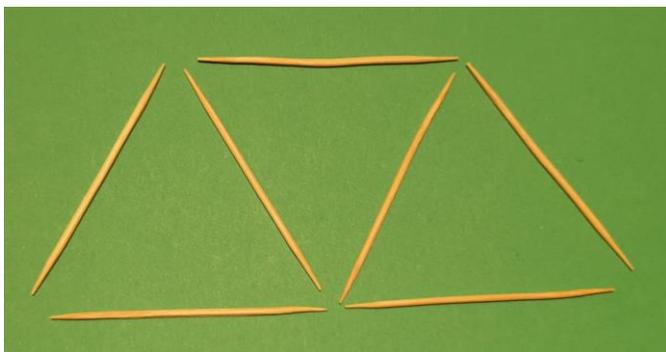
Have a look at this pattern...



How many sticks?



How many triangles? How many sticks?



How many triangles? How many sticks?

Can you make the next one?

How many sticks were used to make 4 triangles?

Can you explain what is happening to this pattern?

How many sticks for 15 triangles?

Record your thinking in your scrap book