St Cyres Maths transition tasks

We want students to have a Growth Mindset in Maths. This means you will not always know the answer, as long as you TRY and don't give up, we'll be proud of you, and you'll build resilience if you continue despite finding things challenging.

These challenges are designed to get you to think, look for patterns, try different methods, and give you a sense of achievement when you spot something new.

If you can't find the answer keep going.
If you still can't find the answer then ask a family member.
If you still can't find the answer then ask a teacher at your school
If you still can't find the answer search online.
If you still can't find the answer then ask your Maths teacher once you start at St Cyres.

All these tasks were taken from www.subtangent.com/maths (Author Duncan Keith) and www.mathsisfun.com

1. Find the Path

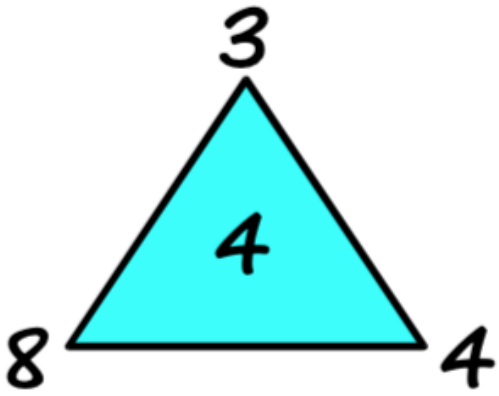
Start at the bottom left square and move up, down, left or right until you reach the finish.
Add the numbers as you go.
Can you make exactly 53?
What is the smallest number you can make?
What is the highest number of squares you can visit without revisiting any?

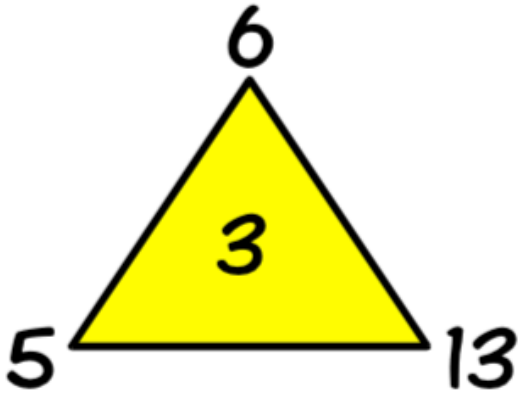
	4	9	7	7	4 ⇨ Finish
	8	9	4	5	7
	6	6	4	9	9
	7	8	8	8	6
Start ⇨	5	5	6	5	5

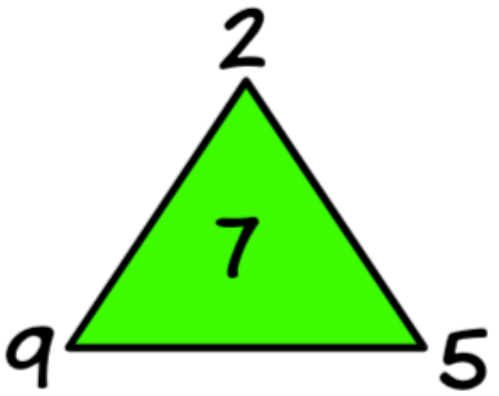
Challenge: Can you create your own maze?

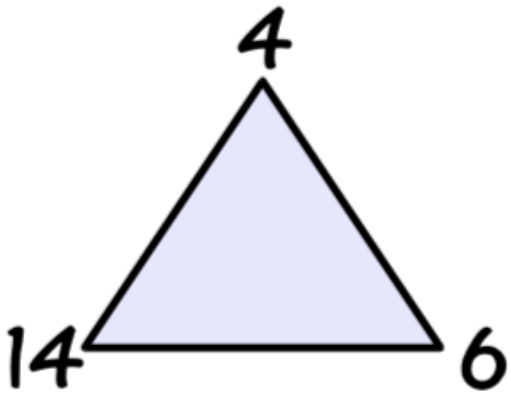
2. Missing number

Which number should go in the empty triangle?
Look for patterns using the numbers at the corners.
Hint: Try to +, -, x or ÷





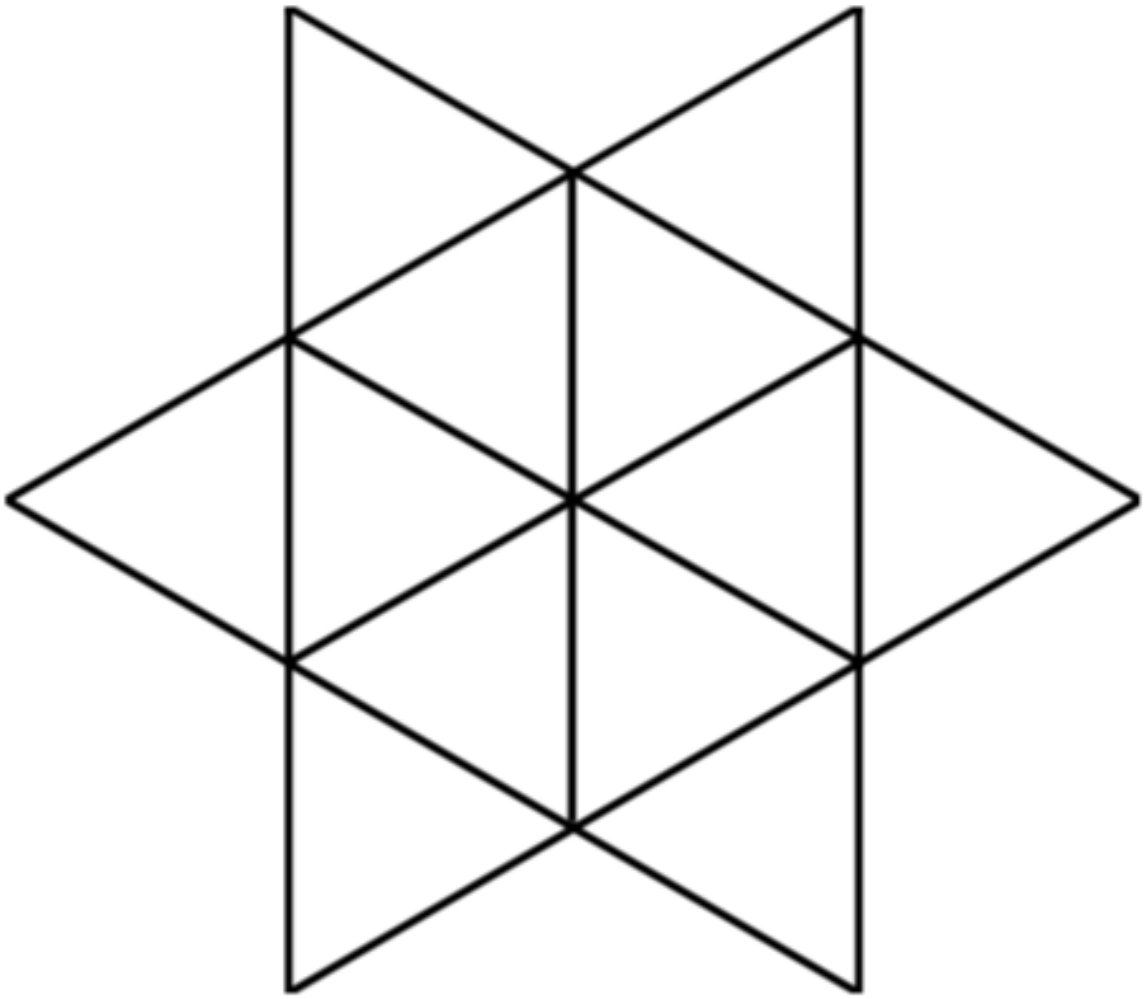




Challenge: Create your own triangle puzzle.

3. How many triangles?

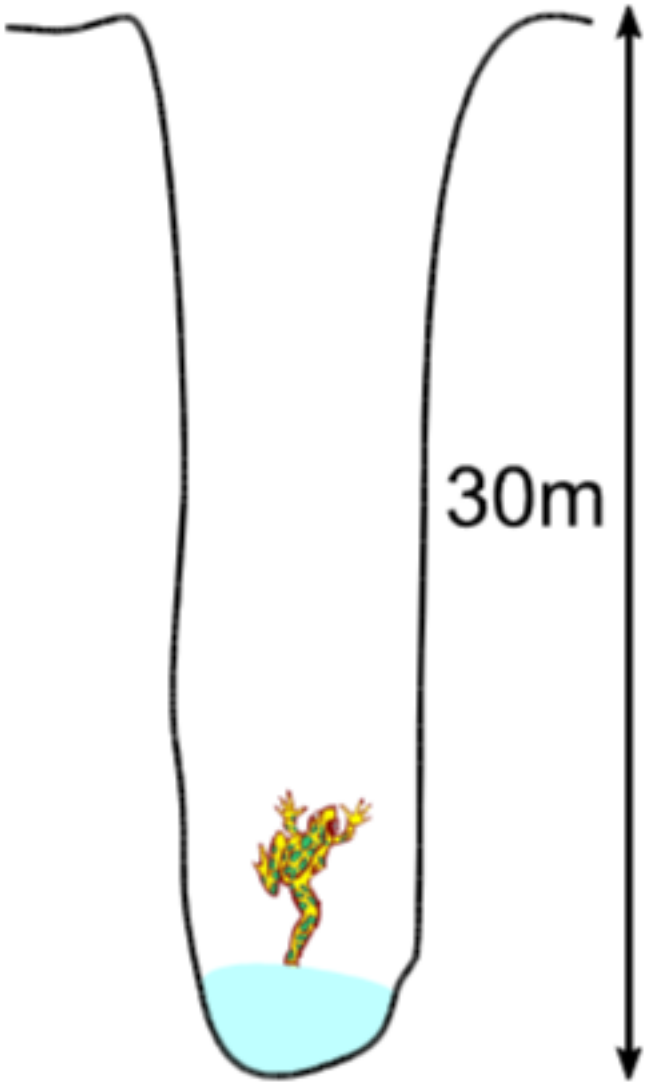
How many triangles can you see in this picture?
Hint: There are more than 12.
How could you explain your findings to others?



Challenge: How many squares on a Chess board?
(Hint: Not 64)

4. The jumping frog

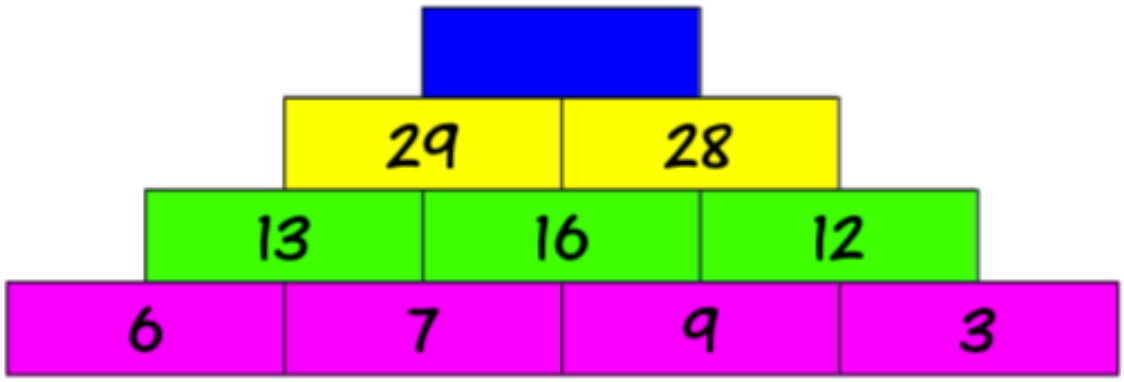
A frog has fallen into a pit that is 30m deep.
Each day the frog climbs 3m, but falls back 2m at night.
How many days does it take for him to escape?
Hint: Once he reaches the top he does not slide back down)



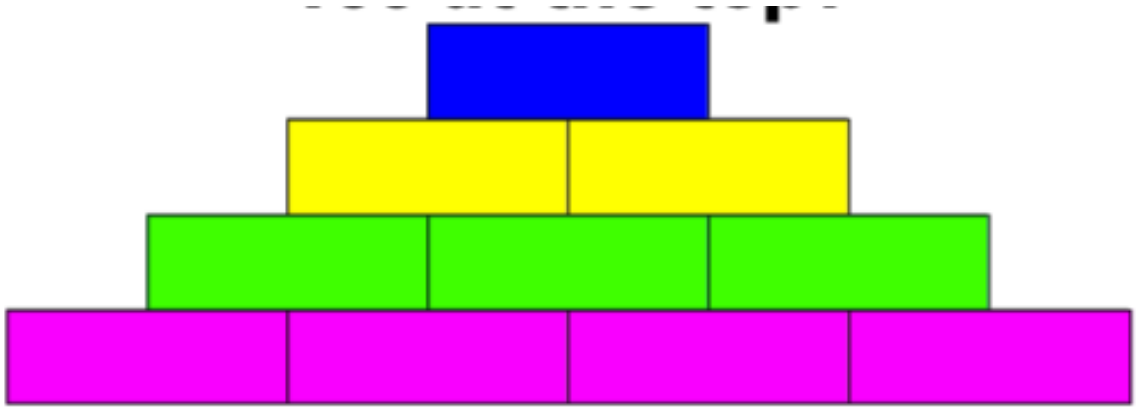
Challenge: What if the numbers were different? (Eg. up 4m down 2m)

5. Number Pyramids

Can you work out what number will be at the top of the pyramid?



Can you make a pyramid with 100 at the top?



Challenge: Can you make a pyramid using algebra?