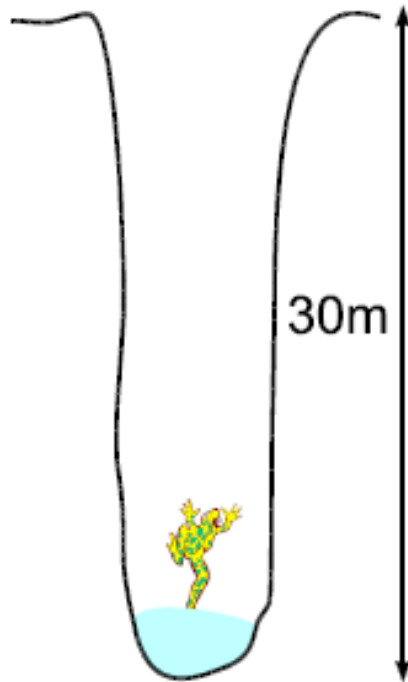


Morning Work

Monday 18th January 2021

A frog has fallen into a pit that is 30m deep.

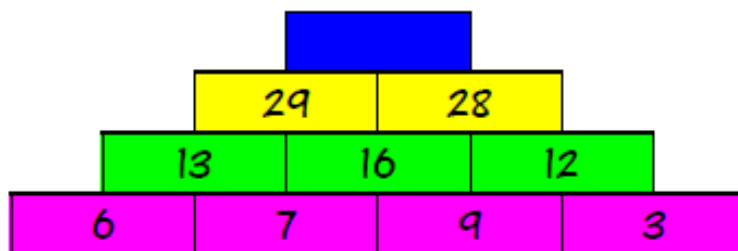


**Each day the frog climbs 3m,
but falls back 2m at night.
How many days does it take
for him to escape?**

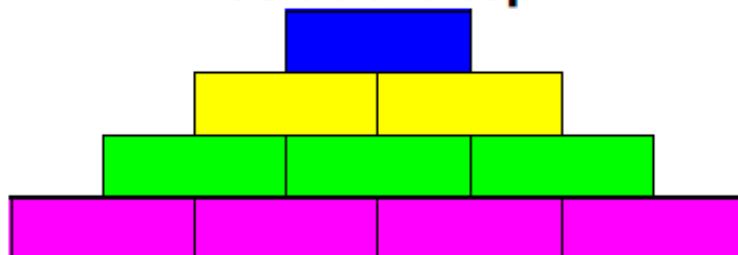
Morning Work

Tuesday 19th January 2021

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



Can you make a pyramid with 100 at the top?



Morning Work

Wednesday 20th January 2021

Here are the first few square numbers:

1	4	9	16	25	36	49
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Here are the first few Fibonacci numbers:

1	1	2	3	5	8	13
---	---	---	---	---	---	----

The square numbers are well in the lead. Do the Fibonacci numbers ever catch up?

...and here are the triangular numbers coming up on the rails...

1	3	6	10	15	21	28
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Morning Work

Thursday 21st January 2021



6 is a very special number.

The factors of **6** are **1**, **2**, **3**
and **6**.

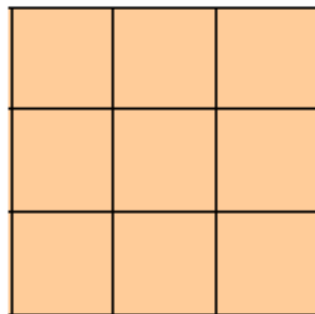
If we add the factors other
than **6** we get **1+2+3=6**.

Can you find another perfect
number?

Morning Work

Friday 22nd January 2021

**Can you put the digits 1 to 9 in
a square so that every row,
column and diagonal add to 15?**



This example doesn't work:

1	3	5	→9
9	6	4	→19
2	7	8	→17

↙13 ↓12 ↓16 ↓17 ↘15