

# Some mathematical thinking for you!

## Lighthouses

On the coast there are three lighthouses.



The first light shines for 3 seconds, then is off for 3 seconds.

The second light shines for 4 seconds, then is off for 4 seconds.

The third light shines for 5 seconds, then is off for 5 seconds.

All three lights have just come on together.

When is the first time that all three lights will be off?

When is the next time that all three lights will come on at the same moment?

## Age old problems

1. My age this year is a multiple of 8.  
Next year it will be a multiple of 7.  
How old am I?
2. Last year my age was a square number.  
Next year it will be a cube number.  
How old am I?  
How long must I wait until my age is both a square number and a cube?
3. My Mum was 27 when I was born.  
8 years ago she was twice as old as I shall be in 5 years' time.  
How old am I now?

