Thursday

25.06.2020

Good morning Longboats, how are you today?

Starter

Amy has a regular octagon. All its sides and angles are equal. How many lines of symmetry will it have? How do you know?

Main Activity

Today, we are still thinking about time but we are looking more at a problem solving aspect of time and how time looks. Look at these words, do you notice anything strange about them?

Hannah racecar rotator taco cat radar

Did you work it out?

They are all palindromes.

A palindrome is when a word reads exactly the same forwards and backwards. Read each palindrome backwards – can you see that it makes the same word? You can have palindromic numbers too, like 1001, 5115, 242 – there are lots of them. There are even palindromic dates! For example, 02.02.2020 or 01.02.2010.

Below are some different activities to do with palindromes. How many can you complete?

Can you find 10 examples of palindromic dates? *Remember – you can only use numbers that would be in a real date – so the days can only go as high as 31 (or sometimes 30 or 28) and the months can only go as high as 12. The year can be anything you want up to 2020!*	Imagine you have a 24 hour digital clock. how many of the times during the day will be palindromic? *Remember – the minutes can only go up to 59 before they go back to 0 and the hours can only go up to 23 (because midnight is 00:00)*	Is it possible to have a 24 hour digital time that is symmetrical but is not a palindrome? Prove that you are correct using a diagram and a clear written explanation.
Do the blue activity before you do this one – it's a good systematic start. Some times are not just palindromic, they are also symmetrical! For example, 00:00 has a vertical line of symmetry right through the colon and a horizontal one too! Can you find all the possible examples for symmetrical 24 hour digital times? Make sure that you work systematically so you don't miss any! *Hint: it will help if you start out by looking for digits with a line of symmetry – if the digit doesn't have a line of symmetry (e.g. 4) then no time with that digit in will have a line of symmetry either.*		