Palindromic time intervals

Children find palindromic digital times and convert these to analogue. They then calculate the intervals between them.

Skills practised:

- Writing digital and analogue times
- Converting between digital and analogue times
- Finding an interval between two times

Conjecture: The longest interval between two palindromic times is one hour and ten minutes.

What to do:

Children work individually or in pairs.

1. Write several palindromic digital times. These are digital times that read the same backwards as forwards, e.g. 3:03 or 6:26.
2. Start to list some palindromic times in a systematic way.
3. Try to find a system, so you know you are finding them all.
   Can you find a similarity in the lists? For example, times beginning 1:01, 1:11, 1:21 and times beginning 3:03, 4:03, 5:03.
4. Take one of your lists of palindromic digital times and convert the times to analogue format, e.g. One minute past one.
5. Find the interval between each pair of times on the list.
   What do you notice about the intervals?
6. Make sure you have ALL the palindromic times. Do any not fit in the usual lists?

   Can you find an interval of one hour and ten minutes? Is this the longest interval between palindromic times?

Aims:

– To find intervals between two times
– To be systematic in finding times and list these in an ordered way
– To demonstrate that all possible times have been considered

Minimum number of calculations expected

N/A

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    Can you find a similarity in the lists?

4. Take one of your lists of palindromic digital times. Convert the times to analogue format.

5. Find the interval between each pair of times on the list.
    What do you notice about the intervals?

6. Make sure you have ALL the palindromic times. Do any not fit in the usual lists?

7. Can you find an interval of one hour and ten minutes?
    Is this the longest interval between palindromic times?

Palindromic times

1:01 1:11 1:21 ...

2:02 ...