

Hanging Out

Activity

Students are shown some numbers that are 'hanging out'. Why do they think this might be? Can students spot any patterns that the numbers all share and then create numbers that could join in?

This activity gets students to look for commonalities between the numbers shown. Can students identify the fact that each number is palindromic? Can they create some palindromic numbers of their own?

To support

- ① Use guiding questions:
- What do you notice about the numbers?
 - Do they have anything in common?
 - If you look at the first digit and the last digit, what do you notice?



To challenge:

Students could...

- ① Include additional information about each number.
- odd/even
 - write it in words
 - expand/partition it
 - round it to the nearest 10, 100, 1,000, etc.
 - identify 1 more/1 less or 10 more/10 less, etc.
- ② Explore the reverse and add rule
- Make a number, make a new number by reversing the original number and then add the numbers together. Do you always create a palindrome? Can you find any exceptions?
 - $125 + 521 = 646$
 - 196 is an example of an exception

Hanging Out



What do you notice about all these numbers that are hanging out together?
What other numbers could also hang out?

11

363

9,669

58,285

47,074

Solution



All of these numbers are palindromes! They read the same forwards and backwards!

11

363

9,669

47,074

58,285