

Palindromic numbers

Syllabus Ref: NS4.1

Syllabus Glossary (p.197)

: numbers that are the same if read forward or backwards eg 44 , 23532

Background information:

Numbers that are not palindromes can produce palindromes by a process called 'reverse and add' ie. we reverse the digits and then add the new number to the original number

Example 1: Starting with 17

$$17 + 71 = 88 \quad [1 \text{ step}]$$

Example 2: Starting with 381

$$381 + 183 = 564$$

$$564 + 465 = 1029$$

$$1029 + 9201 = 10230$$

$$10230 + 03201 = 13431 \quad [4 \text{ steps}]$$

The first 19 palindromic numbers are:

11, 22, 33, 44, 55, 66, 77, 88, 99, 101, 111, 121,

131, 141, 151, 161, 171, 181, 191, ...

11

22

33

44

55

66

77

88

99

101

111

121

131

141

151

161

171

181

191

