Dan the Detective Answers

- Dan found a three-digit even number.
- Two of its digits are greater than five.
- The number rounds to 500.
  What could the number be?

- If the number rounds to 500 then the number must be in the range 450 – 549.
- As the number is even then the ones digit needs to be 0, 2, 4, 6 or 8.
- The hundreds digit cannot be greater than five as the number needs to round to 500.
- This means that the tens and ones digits need to be greater than five.
- So Dan's number must be any even number from 466 – 498 with the ones digit being greater than 5.
- Therefore the number could be 468, 476, 478, 486, 488, 496, 498.

- *The final statement that could be added to gain one solution:*
  The tens digit is the same as the ones digit.

- Dan found a three-digit odd number.
- The sum of the hundreds and ones digits is ten.
- The number rounds to 200.
  What could the number be?

- As the hundreds and the ones digits add up to ten and the number is odd the possibilities are:

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  H   T   U
  9   _   1
  7   _   3
  5   _   5
  3   _   7
  1   _   9
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- As the number rounds to 200 only the last solution is possible with the tens digit being 5, 6, 7, 8, 9.
- Therefore the number could be 159, 169, 179, 189 or 199.
- *The final statement that could be added to gain one solution:*
  The tens digit is the same as the ones digit.