

Satisfying Statements

So what are triangular numbers?

- | | | |
|------|------|------|
| - 1 | - 28 | - 78 |
| - 3 | - 36 | - 91 |
| - 6 | - 45 | |
| - 10 | - 55 | |
| - 15 | - 66 | |
| - 21 | | |
- } 1 and 2 digit triangular numbers

Which of these are:

- Multiples of 5 = 10, 15, 45, 55
- Even, but not multiples of 4 = 6, 10, 66, 78
- Multiples of 3 but not multiples of 9 = 15, 21, 6, 3, 66
- Two digit numbers = 10, 15, 21, 28, 36, 45, 55, 66, 78, 91

Numbers which:

- appear in no categories = 1
- appear in one category = 36, 91, 28, 6
- appear in two categories = 45, 21, 55, 78
- appear in three categories = 10, 15
- appear in four categories = _____

(must be a 3 digit number that fits into all categories)

Triangular 3 digit numbers up to 300:

- 105 - 190 - 300
- 120 - 210
- 136 - 231
- 153 - 253
- 171 - 276

- Multiples of 5 = 105, 120, 190, 210, 300
- Even, but not multiples of 4 = 190, 210,
- Multiples of 3 but not multiples of 9 = 105, 120, 210, 231, 276, 300

Numbers which:

- appear in no categories = 136, 171, 153, 253
- appear in one category = 231, 276
- appear in two categories = 190, 105, 120
- appear in three categories = 210

So, the number 210 fits into all 3 of the statements but it is not a two digit number

10 and 15 are 2 digit numbers but only fit into 3 of the 4 categories.