

- Let X be the set of integers from 4 to 300 inclusive.

7. How many elements of X contain the digit 7?

8. How many elements of X do not contain the digit 0?

9. How many elements of X are greater than 101 and do not contain the digit 6?

10. How many elements of X have digits in strictly increasing order? (examples: 125, 48, 3)

11. How many elements of X are of the form abc where $a \neq 0$, $a < b$ and $c < b$?

12. How many three digits elements of X are there where $a < b$ or $c < b$?