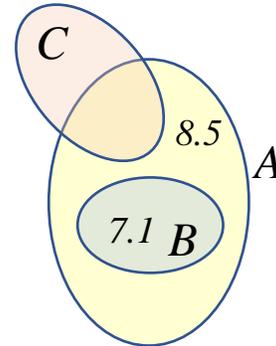


1. Use the picture of Venn diagrams to check are the following statement true or false?

$$8.5 \in A; \quad 8.2 \in B; \quad 7.1 \notin C;$$

$$7.1 \notin B; \quad A \not\subset B; \quad C \subset B$$

$$A \cap B = \emptyset; \quad A \cup B = B$$



2. Write in increasing order the elements of the set of natural numbers, containing two 5 and five 0. (One of these elements is 5050000.)
3. Evaluate. (Try to not use paper to do your calculations, do mental math and write only the resulting answers for each step). Answer is 10.

$$(12 - 8.4) : 0.09 \cdot 0.7 - 0.3 \cdot (0.6 + 3.12) : (14.18 - 7.98) : 0.01$$

4. Write the sentences as algebraic expressions:

Example:

Number a is a multiple of 7.

It means that 7 is a factor (also a divisor) of number a . and

$$a = 7 \cdot b, \quad b \in N$$

- 9 is a divisor of number b .
 - Number m is a multiple of 5.
 - Number c is a multiple of 2 and 5.
 - Number k is even.
 - Number p gives 1 as a remainder when divided by 7.
5. Set A contains elements:
- $$A = \{315, \quad 79, \quad 8181, \quad 490, \quad 102\}$$
- $A(n)$ is a subset of the set A , containing the multiples of n . Find what elements are in $A(2)$, $A(5)$, $A(3)$, $A(9)$, $A(6)$, $A(15)$?
- Example: $A(10) = \{490\}$.
6. Two ants set off at the same time from the same anthill to gather pine needles. One ant crawls at a speed of 3 cm/s, and the other crawls at a speed of 5 cm/s. What will be the difference between them after 8 seconds, if: 1) they are both heading north; 2) one ant is heading north and the other one south?