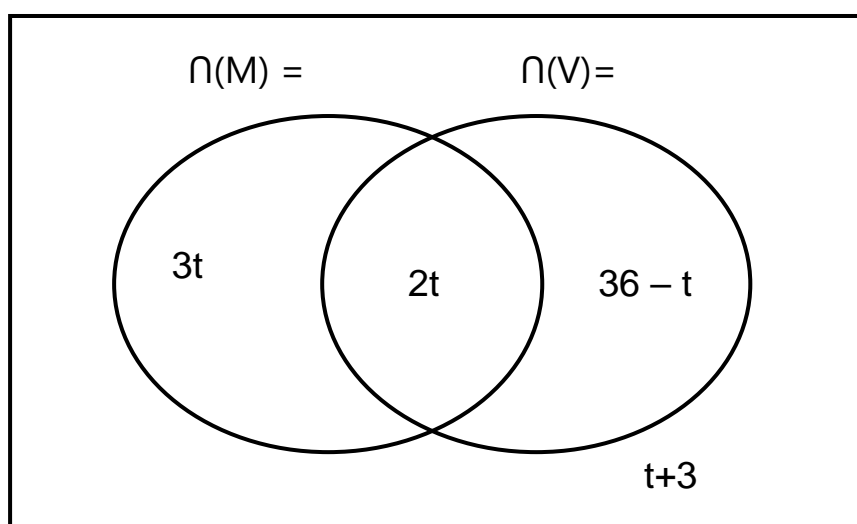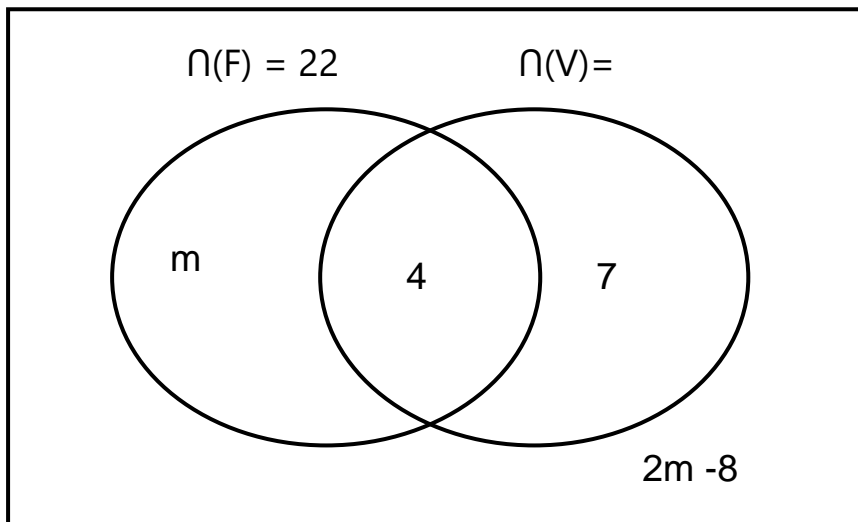## Activity eight

More about application of sets.
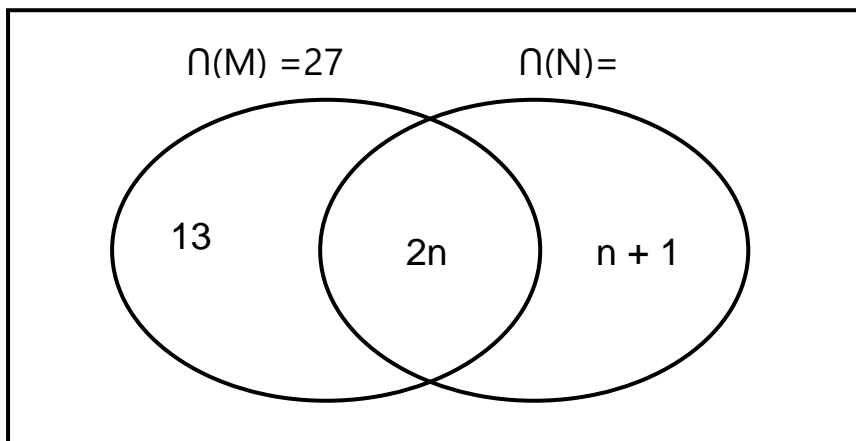
1. In a primary seven class of 50 pupils, 27 like Math (M), 22 like Science (S), X like both Maths and Science and 3 do not like any of the two subjects.
   a) Draw and complete the venn diagram.
   b) Find x.
   c) Work out the number of pupils who like one subject only.
2. In a class of 42 girls, (3n -6) girls play netball (N) only, 2n play both netball and volleyball while 30 girls volleyball (V).
   a) Draw and complete the venn diagram.
   b) Find the value of n.
   c) How many girls play one game?
3. In a class, 31 pupils play Tennis (T) and (d+5) play volleyball (V) only, d pupils play both games while 3 do not play any of the two games.
   a) Draw a venn diagram and represent the above information.
   b) If 27 pupils play volleyball altogether, find the value of d.
   c) Find the total number of pupils in the class.
4. In class of 40 pupils, 25 like English (E), 15 like Science (S), h like both English and Science, while 8 like none of the two subjects.
   a) Draw a venn diagram and represent the above information.
   b) Find the value of h.
   c) How many pupils like atleast one subject in the class?
5. The venn diagram shows the number of students who play volleyball (V) and Netball (N). The number of students who play volleyball equals to the number of students who play netball.

$\cap(M) =$ $\cap(V)=$

3t   2t   36 – t

t+3

a) Find the value of t.

b) How many students do not play volleyball?

6. In a village, (2n – 9) farmers grow millet (M) only, 2n farmers grow potatoes (P), 18 grow both crops while 3 grow other crops.

   a) Draw the venn diagram and represent the above information.

   b) Given that 49 farmers grow only one type of crop. Find the value of n.

   c) Find the total number of candidates who attended the party.

7. The venn diagram below shows the number of pupils who enjoy football (F) and volleyball (V).
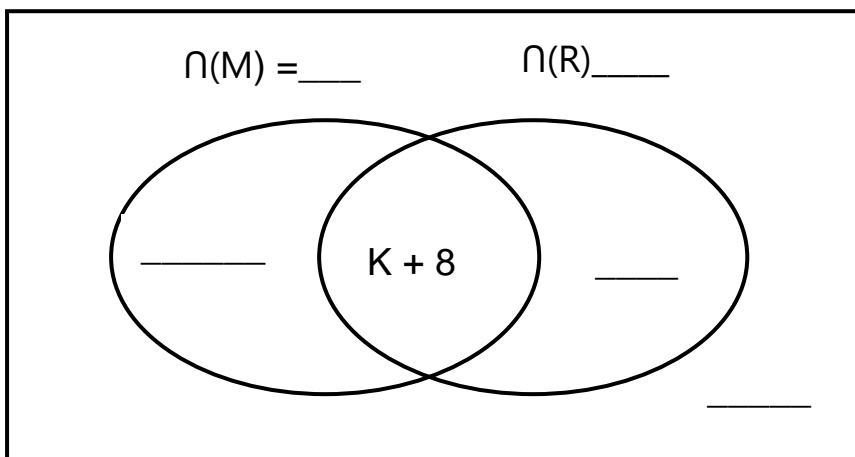
$n(F) = 22$ $n(V) =$

m   4   7

2m -8

a) Find the value of m.

b) How many pupils play volleyball?

c) Find the probability of selecting at random a pupil who enjoys neither of the two games.

8. Use the venn diagram below to answer the questions that follow.

$n(M) = 27$ $n(N) =$

13   2n   n + 1

a) Find the value of n.

b) Find ∩ (M U N).

9. In class, 24 pupils eat Posho (P), (x+6) eat Cassava © only, x eat both Posho and Cassava. 2pupils eat none of these.

a) Draw the venn diagram and represent the above information.

b) If 32 pupils eat Cassava, what is the value of x.

c) Find the number of pupils in the class.

10. In a society, 35 farmers grow Matooke (M), (2K -3) grow Rice, (K +8) grow both crops while k farmers do not grow any of the two crops.

a)

$$\varepsilon =$$

∩(M) =____   ∩(R)____

K + 8

b) Given that 23 farmers grow Rice, find the value of K.

c) Find the total number of farmers in the society.