

## PLE TOPICAL QUESTIONS FROM 2023-2011

### TOPIC : SET CONCEPT

2023.(no.3)

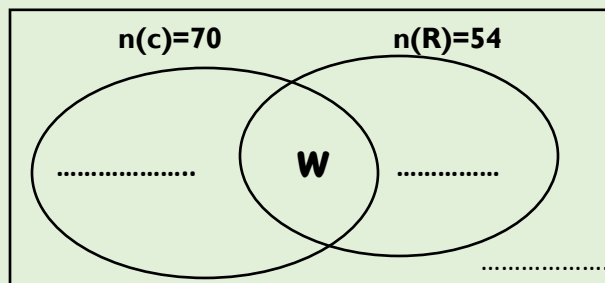
1. Given that;  $R = \{a, b, c, d\}$  and  $s = \{a, f, p, c, s\}$ . Find  $n(R \cup S)$

(no.23)

2. A total of 120 guests were invited for a marriage ceremony. 70 guests attended the church service (C), 54 guests attended the reception (R), and (W) guests attended both the church service and the reception. 40 guests did not turn up for the marriage ceremony.

(a) Use the given information to complete the venn diagram below.

(03mks)



(b) Calculate the number of guests who attended both the church service and reception.

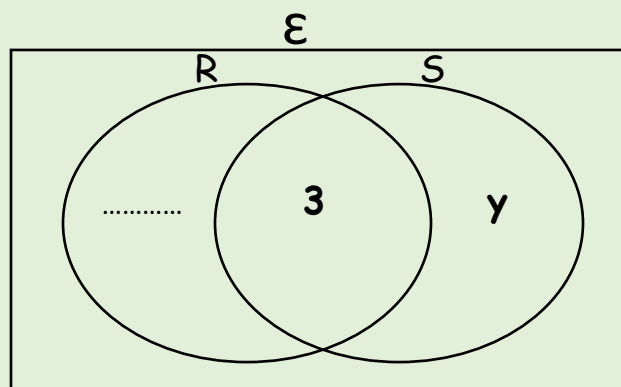
2022.(no.4)

3. Given that  $P \cup Q = \{1, 2, 3, 4, 5, 6, 7, 8\}$ ,  $P \cap Q = \{1, 4, 7\}$  and  $P' = \{5, 6, 8\}$ .

List the elements of set P.

4. In a village, 3 farmers grow both Rice (R) and sun flower (S), 24 farmers grow rice and y farmers grow sunflower only.  $2y+9$  farmers grow none of the two crops.

(a) Use the given information to complete the venn diagram below.



COMPILED BY #TR DENIS

TEL:0759708497, Wtsap:0786518588

(b) Given that the number of farmers who grow rice only is equal to the number of farmers who grow none of the two crops. Find the value of  $y$ .

(c) How many farmers grow sunflower?

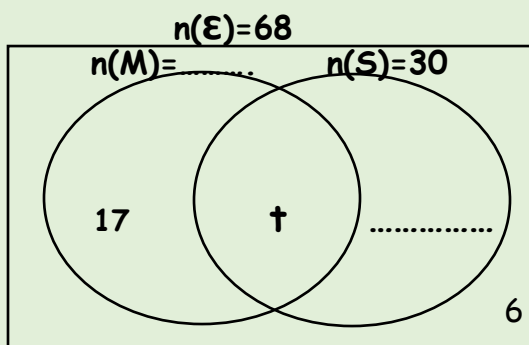
2020(no.4)

5. Given that the subsets of set  $Q$  are  $\{m\}, \{k\}, \{m, K\}, \{ \}$ .

Find the number of set  $Q$ .

6. In a class party, two types of drinks water served, soda ( $S$ ) and mineral ( $M$ ). 30 pupils took soda and  $t$  pupils took both soda and mineral water; 6 pupils took neither of the drinks while 17 pupils took only mineral water. The number of pupils who took soda only was twice that of those who took both soda and mineral water.

(a) Use the given information to complete the venn diagram below.

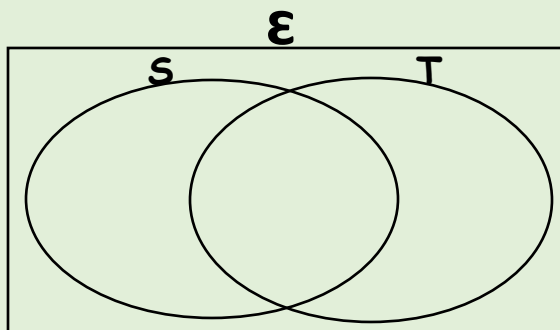


(b) Find the number of pupils who took both drinks.

(c) Calculate the total number of pupils in the class.

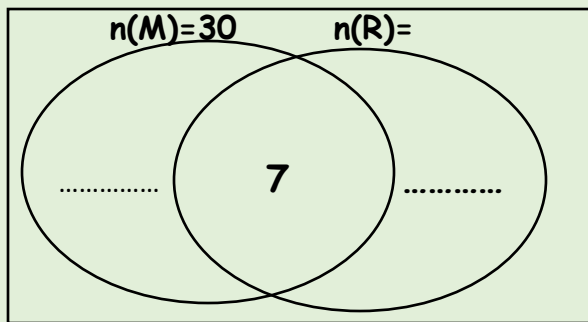
2019(no.)

7. In the venn diagram below, shade the region ( $S \cup T$ )'

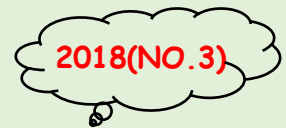


8. A class of 68 pupils was served matooke (M) and rice (R). 30 pupils ate matooke and 24 ate rice. 7 pupils ate both matooke and rice while 9 pupils did not eat either of the foods.

(a) Use the given information to complete the Venn diagram below.



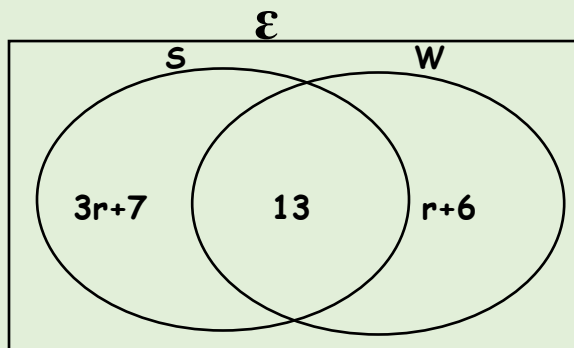
(b) How many pupils ate rice only?



9. Given that  $P = \{a, b, c, d, e, f, g\}$  and  $Q = \{b, a, f, e, h\}$ . Find  $n(P \cup Q)$

(no.21)

10. At a party guests were served with soda (S) and mineral water (W) as shown in the Venn diagram below. Study and use it to answer the questions that follow.



(a) If 32 guests were served with soda,  
find the value of  $r$ .

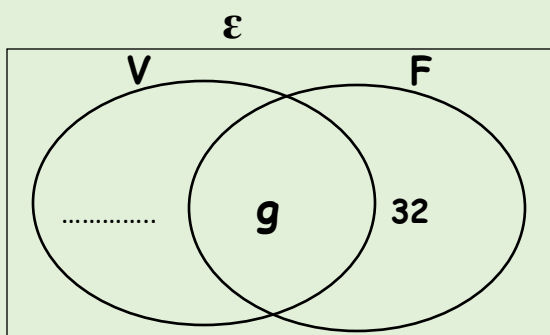
Find the total number of guests who attended the party.

2017(no.6)

11. Given that set  $N = \{c, t, p\}$ , List all the subsets in  $N$ .

12. In a class, 32 pupils play football (F) only,  $g$  play both volleyball (V) and football,  $(2g-10)$  play volleyball but not football while  $(g-2)$  play neither of the two games.

(a) complete the venn diagram below

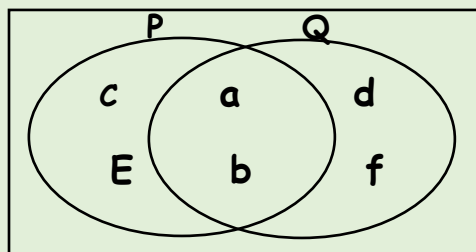


(b) Given that 62 pupils play one game only, find the value of  $g$

(c) Calculate the number of pupils in the class.

2016(no.21)

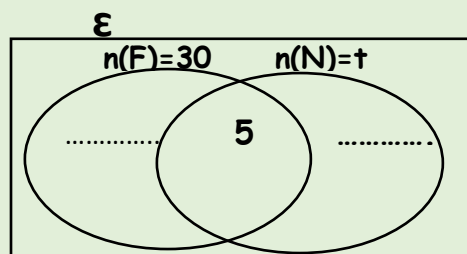
13. Use the venn diagram below to find  $n(P \cap Q)$



(no.21)

14. In a class of 41 pupils, 30 play football (F),  $t$  play netball (N), 5 play both football and netball and 3 pupils do not play any of the two games.

(a) Use the above information to complete the venn diagram below.



(b) Find the value of  $t$ .

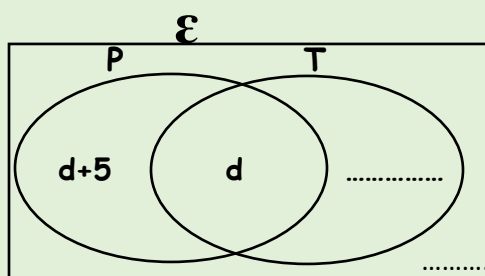
(c) A dice is tossed once. What is the probability that a number less than 5 will appear on top?

2015(no.4)

15. Given that set  $k = \{g, m, v, z\}$ . Find the number of subsets in set  $k$ .

16. In a class of 31 pupils play tennis (T) and  $(d+5)$  play volleyball (V) only,  $d$  pupils play both games while 3 play neither of the games.

(a) Use the above information to complete the venn diagram below.



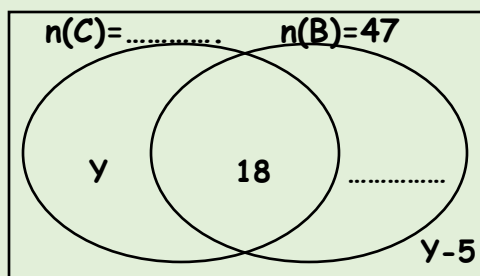
(b) If 27 pupils play volleyball altogether. Find the value of  $d$ .

2014 (no.4)

17. Given that  $k = \{1, 2, 3, 4, 5\}$  and  $M = \{2, 4, 6, 8\}$ . Find  $n(k \cup M)$

18. A birthday attended by 76 guests, 47 guests, where served with beef (B) and 18 were served with both beef (B) and chicken (C),  $y$  guests were served with chicken only while  $(y-5)$  were not served with any of the two dishes.

(a) Use the information above to complete the venn diagram below.



(b) Find the value of  $y$ .

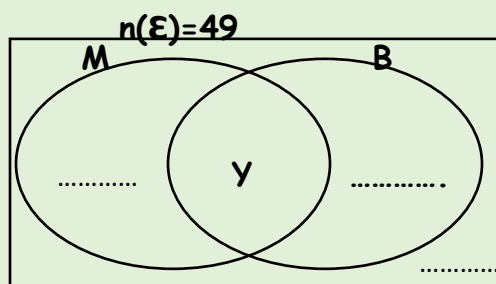
(c) Find the number of guests who were served with chicken.

2013.(no.4)

19. Given that set  $P = \{1, 3, 5, 7, 9\}$  and set  $Q = \{2, 3, 5, 7\}$

20. In village of 49 farmers, 20 grow millet (M), 25 grow beans (B) and  $y$  grow both millet and beans. 3 $y$  farmers grow neither of the two food crops.

(a) Use the information given above to complete.



(b) Find the value of  $y$ .

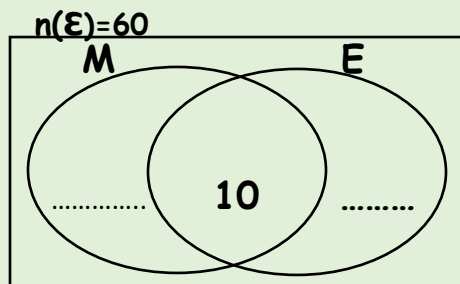
(c) How many farmers grow neither millet nor beans?

2012.(no.5)

21. Given that set  $Q = \{\text{all prime numbers less than } 10\}$ . Find  $n(Q)$ .

22. In a class of 60 pupils, 30 like English (E),  $y$  like Mathematics (M) only, 10 like both subjects and 5 do not like any of the two subjects.

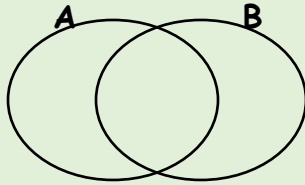
(a). complete the venn diagram below.



(b) Find the value of  $y$ .

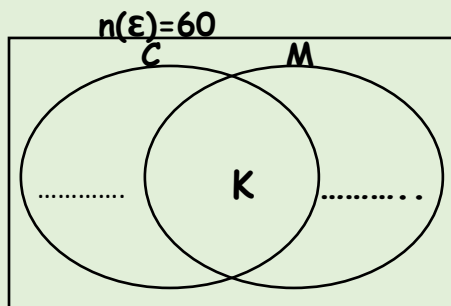
(c). How many pupils like Mathematics altogether?

23. In the venn diagram below. Shade the area  $(A \cap B)$ .



24. At a party attended by 60 pupils, 42 ate chicken (C),  $(K+8)$  ate meat (M) only,  $k$  pupils ate both chicken and meat while 6 did not eat any of the items.

(a). Use the information given above to complete the venn diagram below.



(b). Find the value of  $k$ .

(c). If a pupil is picked at random, what is the probability that a pupil ate m

