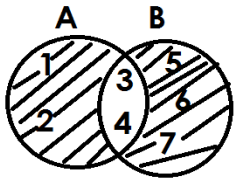
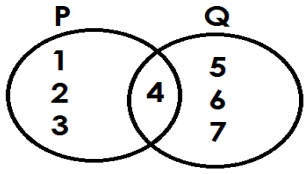
THE TEZ EXAMINATION BOARD
TOPICAL TEST ON SET CONCEPT ONE

SUBSETS:

1.	Given that set P has 3 elements, how many elements have set P?	6.	Given that set P= { }, find number of subsets in set P.
2.	Given that set Q has 4 elements, how many elements have set Q?	7.	Given that set y= {all vowel letters}. Find number of subsets in set y.
3.	Given that set K has 5 elements, how many elements have set K?	8.	If set T= {5}. Find number of subsets in set T
4.	Given that set M has 2 elements, how many elements has set M?	9.	Below is set A and B, Find number of subsets in set $(A \cap B)'$ 

5.	Given that set N has 1 element, how many subsets have set N?	10.	Below is set P and Q. Find number of subsets in P U Q 

FINDING NUMBER OF ELEMENTS GIVEN NUMBER OF SUBSETS

1.	Set K has 1 subset. How many elements are in set K?	5.	Set A has 8 subsets. Find the number of elements in set A.
2.	Set M has 64 subsets. How many elements are in set M?	6.	There are 4 subsets in a set. How many elements are in that set.
3.	Set K has 128 subsets. How many elements are in set K?	7.	There are 16 subsets in a set. How many elements are in that set.

4.	Set M has 256 subsets. How many elements are in set M?	8.	There are 32 subsets in a set. How many elements are in that set.

FINDING PROPER SUBSETS

1.	If P= {a, b, c}, how many proper subsets has set P?	6.	If B= {1, 2}, how many proper subsets are in set B?
2.	Given that M= {p, q, r, s,}. List the number of proper subsets in set M.	7.	Given that R= {a, b, c, d, e, f}. Find the number of proper subsets in set R.
3.	If x= {1, 2, 3}. Find the number of proper subsets in set X.	8.	Find the number of proper subsets of a set which has 4 elements

4.	Set M = {1}, how many proper subsets are in set M?	9.	Find the number of proper subsets of a set which has 3 elements.
5.	How many proper subsets are in a set with 5 elements?	10.	Find the number of proper subsets of a set which has 7 elements.

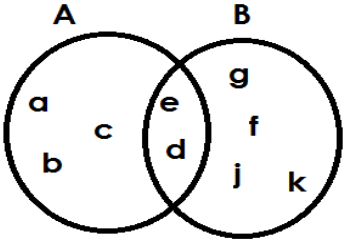
FINDING NUMBER OF ELEMENTS GIVEN NUMBER OF PROPER SUBSETS

1.	Set M has 15 proper subsets. How many elements are in set M?	5.	Find the number of members in a set with 7 proper subsets.
2.	Set K has 255 proper subsets. How many elements are in set k?	6.	Find the number of members in a set with 31 proper subsets

3.	Set R has 63 proper subsets. Find the number of elements in set R	7.	Find the number of members in a set with 511 proper subsets
4.	Set H has 3 proper subsets. How many elements are in set H?	8.	Find the number of members in a set with 127 proper subsets

COMPLEMENT OF SETS

1. Given set A= {a, b, c, d, e} and B= {e, d, g, f, j, k}

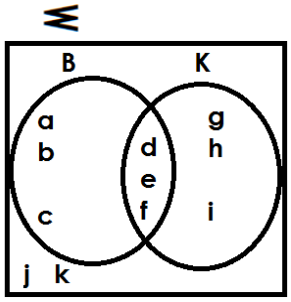
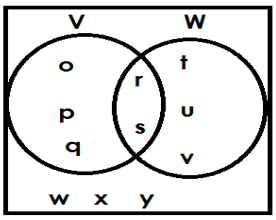


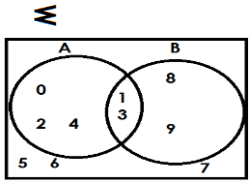
a) a) Find A'

b) List members of (A n B) ^{l}

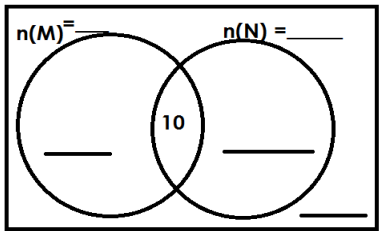
c) The complement of B

d) List the members of (A-B) ^{l}

2.	**Study the Venn diagram below and answer questions**  a) Find the complement of set B b) Find (B n K) ^{I} c) Find (B u K) ^{I} d) **Find** (K-B) ^{I}
3.	**Study the Venn diagram and answer questions**  **a) Find V '** **b) Find (V u W)'** **c) Find (V n W)'** **d) Find (V – W)**

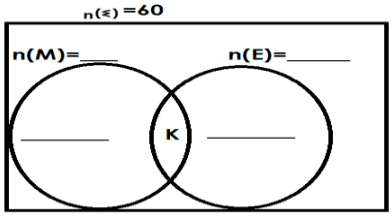
4.	Given the Venn diagram below  a) List all elements in A' b) Find (A u B) ^{I} c) Find n (A n B) ^{I} d) List all members of the universal set

REPRESENTING AND FINDING NUMBER OF ELEMENTS ON A VENN DIAGRAM GIVEN GROUPED DATA

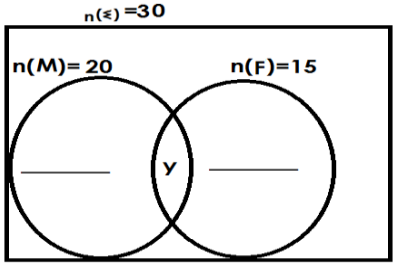
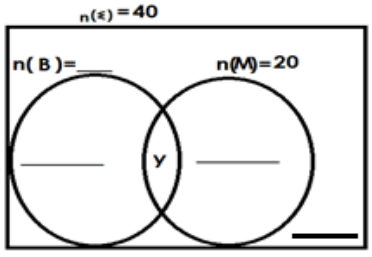
1.	Given that n(M)=18, n(N)=25, n (M n N) =10 and $n(MUN)^{I}$ =4 (a) Complete the Venn diagram below  (b) Find n(M-N) (c) Find $n(\xi)$
2.	In a class, pupils made choices of food stuff they prefer. Given rice(R) and Matooke (M). The findings were as follows; n (R) = 20, n (M) = 28, n (R n M) = 8 and n $(R \cup M)^{I}$ = 2 (a) Draw a Venn diagram representing the above information. b) How many pupils chose rice only? c) Find the number of pupils who chose matooke only. d) How many pupils chose only one type of food?

3.	In a market there are 24 traders who sell rice and 19 who sell beans (B), 11 sell both items. a) Draw a Venn diagram to show the above information. b) Find the probability of picking a trader who sells only one item.

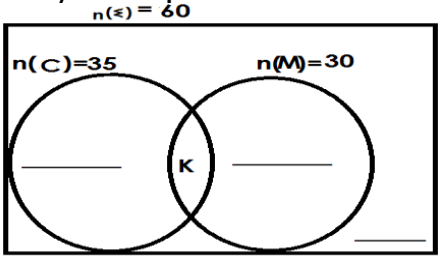
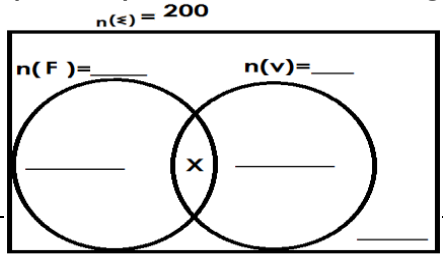
SOLVING PROBLEMS USING A VENN DIAGRAM
(A) GIVEN INTERSECTION AS THE UNKNOWN

1.	1.In a class of 60 pupils, 40 like Math (M), 30 like English (E) and K pupils like both subjects a) Complete the Venn diagram  b) Find the value of k C) How many pupils like only one subject?

	d) Find the probability of picking a pupil who likes Math only.

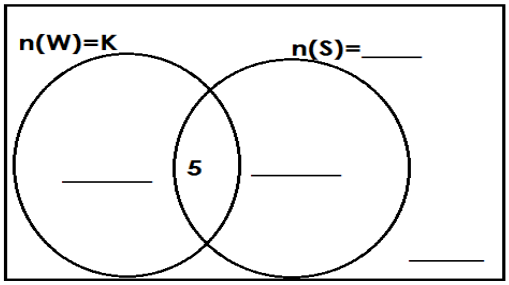
2.	In a group of 30 people, 20 eat meat (M), 15 eat fish (F) and y people eat both dishes. (a) Complete the Venn diagram below using the above information. b) How many people like both dishes?  How many people eat only one dish? d). Find the probability of picking a person who eats fish only from the group at random.
3.	In a village of 40 farmers, 30 grow beans (B) 20 grow maize (M) and y farmers grow both crops while 6 farmers do not grow any of the mentioned crops a) Complete the Venn diagram  b) Find the value of y

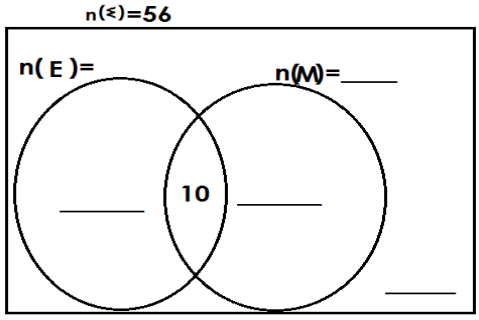
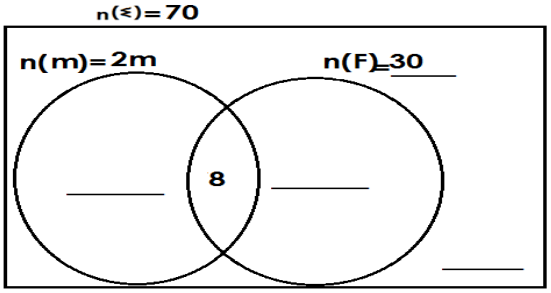
	c) How many pupils do not grow maize?

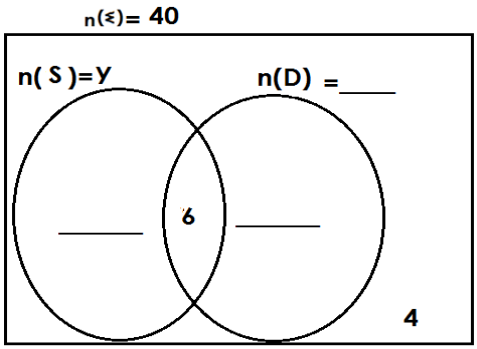
	d) Find the probability of picking a farmer who grows only one crop
4.	At a party attended by 60 people, 35 ate chicken(C), 30 ate meat (M) and K people ate both dishes while 5 people ate neither of the two a) Complete the Venn diagram using the above information  b). How many people ate both dishes? C) Find number of people who ate only one dish d). Find the probability of picking a person who did not eat chicken at the party
5	In a school of 200 pupils,150 play football (F) 100 play volley ball(V) X pupils play both and 40 pupils play neither of the two a) Complete the Venn diagram below  b) Find the value of x

	b) How many pupils play only one game? c) Find the probability of picking a pupil who does not play football from the school at random

(B) GIVEN ONE OF THE SETS AS THE UNKNOWN

1	In a group of 40 people, K people took water (W), 15 people took soda(S) and 5 people took both drinks while 8 people did not take any of the mentioned drinks (a) Complete the Venn diagram  b) Find the value of k C) How many people took only one drink? d) Find the probability of picking a person who did not take water from the group

2.	In a class of 56 pupils, 26pupils like English (E), X pupils like Math(M) 10 pupils like both subjects and 6 pupils like none of the mentioned a) Complete the Venn diagram  b) How many pupils like Math (M)? c) How many pupils like only one subject? d) Find the probability of picking a person who does not like English
3.	At a birthday party attended by 70 people, 2m people ate meat (M),30 people ate fish(F) and 8 people ate both dishes, while 2 people did not eat any of the mentioned. a) Complete the Venn diagram  b) Find the value of m

	c) How many pupils eat only one dish? d) How many pupils do not eat fish?
4.	In a market of 40 traders, y traders sell shirts (S), 15 traders sell dresses(D) and 6 traders sell both types while 4 traders do not sell any of the mentioned a) Complete the Venn diagram b) Find the value of y  b) How many traders sell only one type of clothes? c) Find the probability of picking a trader who sells shirts only