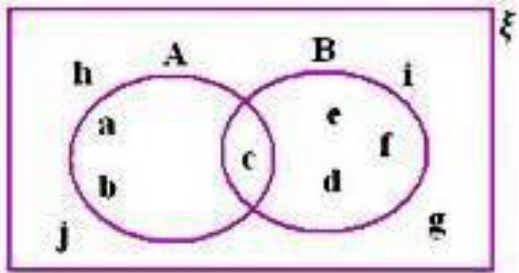


3) Here is a Venn diagram that represents sets  $\xi$ , A and B (the universal set is called  $\xi$  (pronounced xee, instead of U). Write down the elements of each set

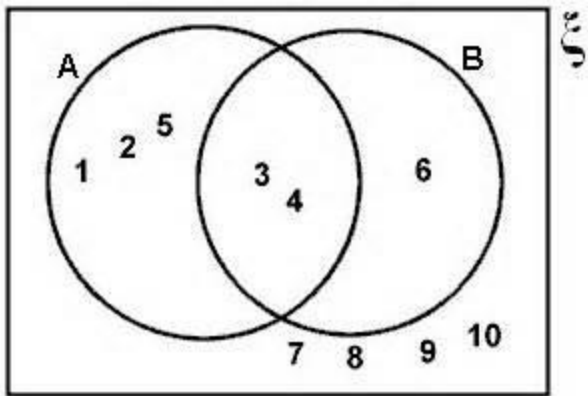


$U = \{ \quad \quad \quad \}$

$A = \{ \quad \quad \quad \}$

$B = \{ \quad \quad \quad \}$

4) Write down the elements of each set depicted in the Venn diagram.

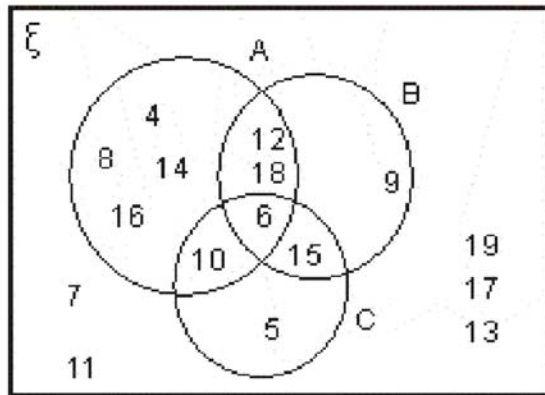


$\xi = \{ \quad \quad \quad \}$

$A = \{ \quad \quad \quad \}$

$B = \{ \quad \quad \quad \}$

5) Write down the elements of each set depicted in the Venn diagram.

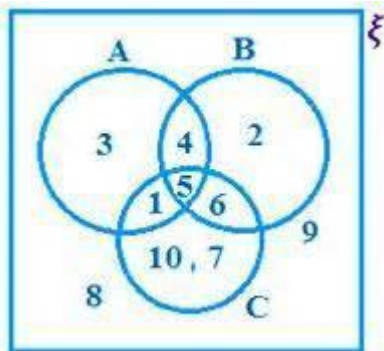


$\xi = \{ \quad \quad \quad \} \quad A = \{ \quad \quad \quad \}$

$B = \{ \quad \quad \quad \}$

$C = \{ \quad \quad \quad \}$

6) Write down the elements of each set depicted in the Venn diagram.

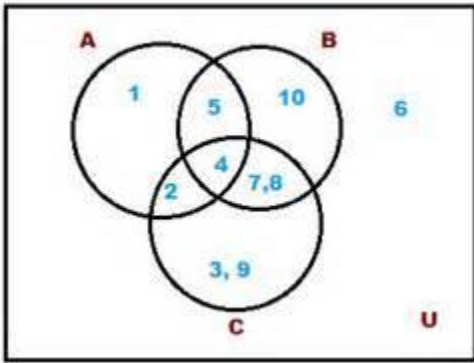


$\xi = \{ \quad \quad \quad \} \quad A = \{ \quad \quad \quad \}$

$B = \{ \quad \quad \quad \}$

$C = \{ \quad \quad \quad \}$

7) Write down the elements of each set depicted in the Venn diagram.

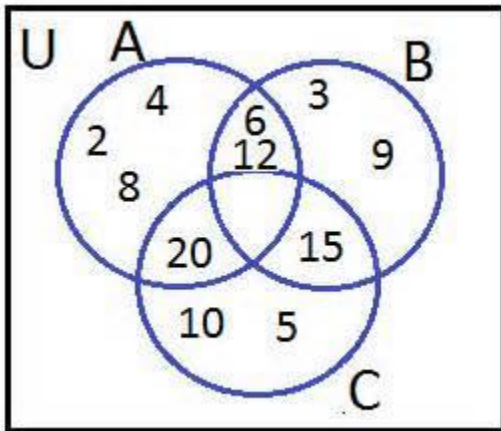


$U = \{ \quad \quad \quad \}$      $A = \{ \quad \quad \quad \}$

$B = \{ \quad \quad \quad \}$

$C = \{ \quad \quad \quad \}$

8) Write down the elements of each set depicted in the Venn diagram.



$U = \{ \quad \quad \quad \}$      $A = \{ \quad \quad \quad \}$

$B = \{ \quad \quad \quad \}$

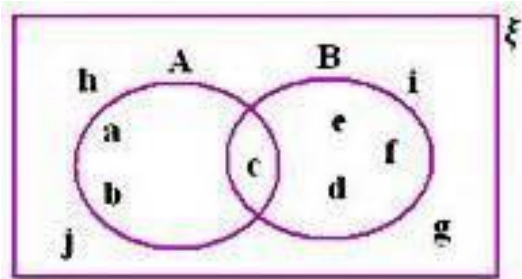
$C = \{ \quad \quad \quad \}$

The rest of the problems in this section will involve these two steps.

- 1) Find the shaded region described in the Venn diagram
- 2) The answer to the question will be each element in the shaded region obtained in step 1.

(Hint look at your homework from section 1.4. Many of the regions you are asked to shade are the same as in section 1.4. You can use your answers to your section 1.4 homework to speed up this section.)

Homework # 9 – 17. Use the Venn diagram to find the requested sets.



9)  $A'$

10)  $B'$

11)  $A' \cup B$  (Hint see section 1.5 #3)

12)  $A \cup B'$

13)  $(A \cap B)'$  (Hint see section 1.5 #5)

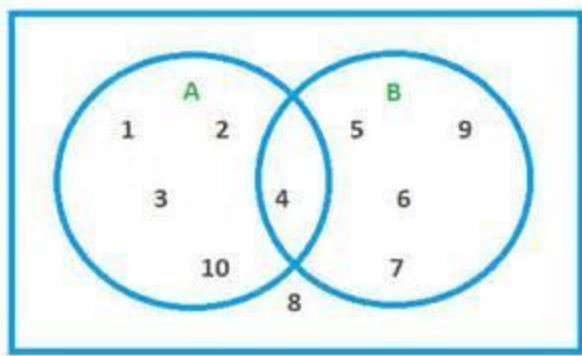
14)  $(A \cap B')'$

15)  $(A' \cup B)'$  (Hint see section 1.5 #7)

16)  $(A \cup B')'$

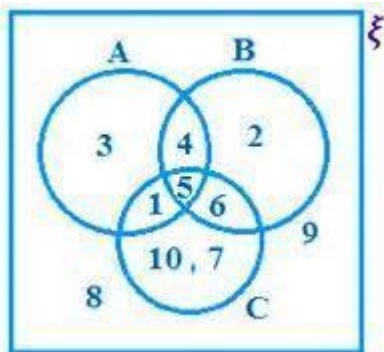
17)  $A' \cup B'$  (Hint see section 1.5 #9)

Homework # 18 – 25. Use the Venn diagram to find the requested sets.



- |                    |   |
|--------------------|---|
| 18) $A \cap B'$    | 19) $A' \cap B'$ (Hint see section 1.5 #2)  |
| 20) $A' \cap B$    | 21) $A' \cap B$                             |
| 22) $(A \cap B)'$  | 23) $(A \cap B)'$ (Hint see section 1.5 #6) |
| 24) $(A' \cup B)'$ | 25) $(A \cup B)'$ (Hint see section 1.5 #8) |

Homework # 26 – 31. Use the Venn diagram to find the requested sets.



- |                        |   |
|------------------------|---|
| 26) $A \cap B \cup C'$ | 27) $A \cap B' \cup C$ (Hint see section 1.5 #10) |
| 28) $A \cap B' \cap C$ | 29) $A \cap B \cap C'$ (Hint see section 1.5 #13) |
| 30) $A \cup B \cup C'$ | 31) $A' \cup B \cup C$ (Hint see section 1.5 #15) |