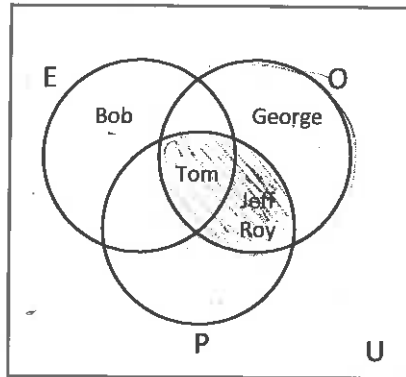


Example 1

Use the Venn diagram provided to list the elements of the following sets.

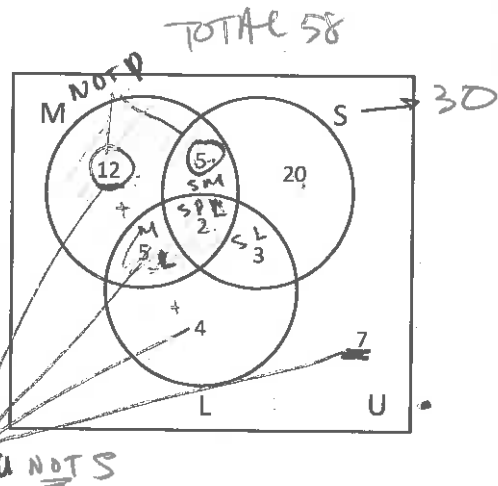
- a) E and P { Tom }
- b) O and P { Jeff, Roy, Tom }
- c) E and O and P { Tom }
- d) E or P { Bob, Tom, Jeff, Roy }
- e) E or O or P { Bob, George, Tom, Jeff, Roy }
- f) only P { } \rightarrow none
- g) not E { George, Jeff, Roy } \rightarrow not in 'E' (Bob, Tom)
- h) E or O but not P { Bob, George }



Example 2

Use the Venn diagram provided to determine the following values. The numbers shown in the Venn diagram indicate the number of elements in each category.

- a) $n(M)$ $12 + 5 + 5 + 2 = 24$
- b) $n(M \cap L)$ $5 + 2 = 7$ (intersecting)
- c) $n(M \cup L)$ $M = 12 + 5 + 2 + 5 = 24$
 $L = 3 + 4 = 7$ } = 31
- d) $n(M \text{ and } L \text{ and } S)$ 2
- e) $n(U \setminus S)$ in set U but NOT in S (30)
- f) $n(M \setminus L)$ $7 + 12 + 5 + 4 = 28$ $U = 58$ $(58 - 30) = 28$
 $U \text{ NOT } S = 30$



Example 3

Explain the difference between the meaning of "and" in the following two statements.

$n(M \text{ and } L)$

$n(M)$ and $n(L)$

Intersecting
How many elements intersecting M and L

Union
How many elements in M added to the elements in L. They are separated.