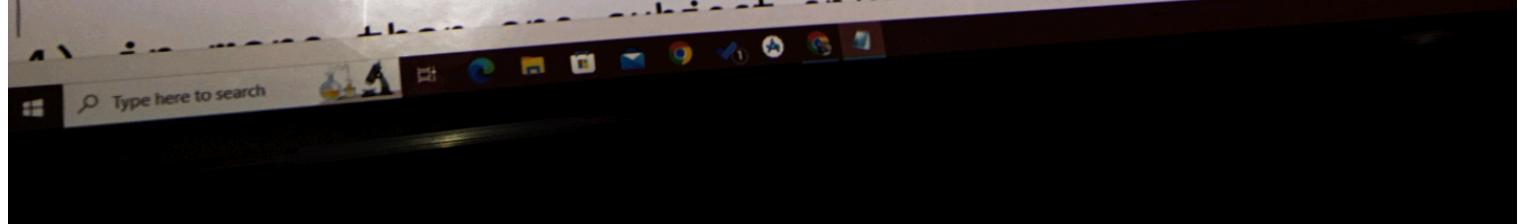
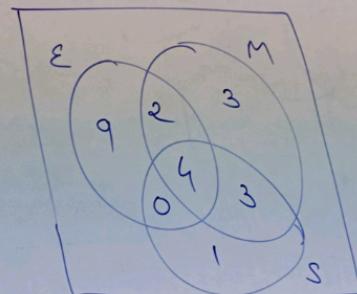


- 3) Out of 100 students; 15 passed in English, 12 passed in Mathematics, 8 in Science, 6 in English and Mathematics, 7 in Mathematics and Science; 4 in English and Science; 4 in all the three.
Find how many passed:
- 1) in English and Mathematics but not in Science = 14
 - 2) in Mathematics and Science but not in English = 07
 - 3) in Mathematics only = 3



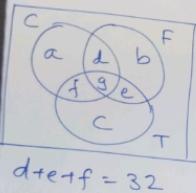
2) A survey was conducted among 300 students. It was found that 125 students like to play football. 90 students like to play exactly two games out of the three games. How many students like to play exactly one game?

$$n(U) = 300$$

$$n(C) = 125$$

$$n(F) = 145$$

$$n(T) = 90$$



$$d+e+f = 32$$

$$\begin{aligned} n(C \cup F \cup T) &= n(C) + n(F) + n(T) - n(C \cap F) - n(C \cap T) - n(F \cap T) + n(C \cap F \cap T) \\ 300 &= 125 + 145 + 90 - [n(C \cap F) + n(C \cap T) + n(F \cap T)] + n(C \cap F \cap T) \end{aligned}$$

$$\begin{aligned} \therefore n(C \cap F \cap T) &= n(C \cap F) + n(C \cap T) + n(F \cap T) - 60 \\ g &= (d+g) + (g+e) + (f+g) - 60 \\ \therefore g - 3g &= d + f - 60 \\ \therefore -2g &= 32 - 60 \\ \therefore -2g &= -28 \\ \therefore g &= 14 \end{aligned}$$

$$(a+b+c)+d+e+f+g = 300$$

$$\therefore a+b+c + 32 + 14 = 300$$

$$\therefore a+b+c = 300 - 46$$

$$\therefore a+b+c = 254$$

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a survey of 600 students in a school, 150 students were found to be drinking Tea and 225 drinking Coffee, 100 were drinking both Tea and Coffee. Find how many students were drinking neither Tea nor Coffee.

$$n(U) = 600$$

$$n(T) = 150$$

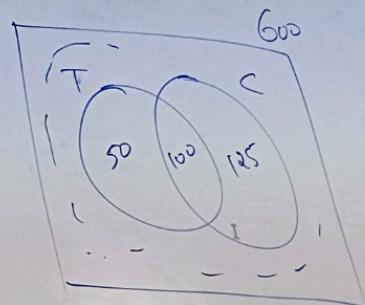
$$n(C) = 225$$

$$n(T \cap C) = 100$$

$$n(T \cup C)' = ?$$

$$\begin{aligned} n(T \cup C) &= n(T) + n(C) - n(T \cap C) \\ &= 150 + 225 - 100 \\ &= 275 \end{aligned}$$

$$\begin{aligned} n(T \cup C)' &= n(U) - n(T \cup C) \\ &= 600 - 275 \\ &= 325 \end{aligned}$$



$$n(U) = 600$$

$$n(T) = 150$$

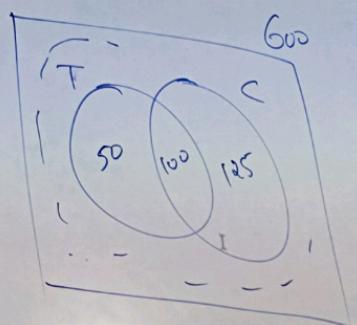
$$n(C) = 225$$

$$n(T \cap C) = 100$$

$$n(T \cup C)' = ?$$

$$\begin{aligned} n(T \cup C) &= n(T) + n(C) - n(T \cap C) \\ &= 150 + 225 - 100 \\ &= 275 \end{aligned}$$

$$\begin{aligned} n(T \cup C)' &= n(U) - n(T \cup C) \\ &= 600 - 275 \\ &= 325 \end{aligned}$$



$$n(U) = 600$$

$$n(T) = 150$$

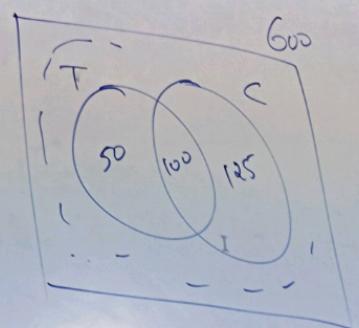
$$n(C) = 225$$

$$n(T \cap C) = 100$$

$$n(T \cup C)' = ?$$

$$\begin{aligned} n(T \cup C) &= n(T) + n(C) - n(T \cap C) \\ &= 150 + 225 - 100 \\ &= 275 \end{aligned}$$

$$\begin{aligned} n(T \cup C)' &= n(U) - n(T \cup C) \\ &= 600 - 275 \\ &= 325 \end{aligned}$$



1) In a survey of 600 students in a school, 150 students were found drinking Tea and 225 drinking Coffee, 100 were drinking both Tea and Coffee. Find how many students were drinking neither Tea nor Coffee.

$$n(U) = 600$$

$$n(T) = 150$$

$$n(C) = 225$$

$$n(T \cap C) =$$

$$n(T \cup C)$$

$$\begin{aligned} n(T \cup C) &= n(T) + n(C) - n(T \cap C) \\ &= 150 + 225 - 100 \\ &= 275 \end{aligned}$$

$$\begin{aligned} n(T \cup C)' &= n(U) - n(T \cup C) \\ &= 600 - 275 \\ &= 325 \end{aligned}$$

