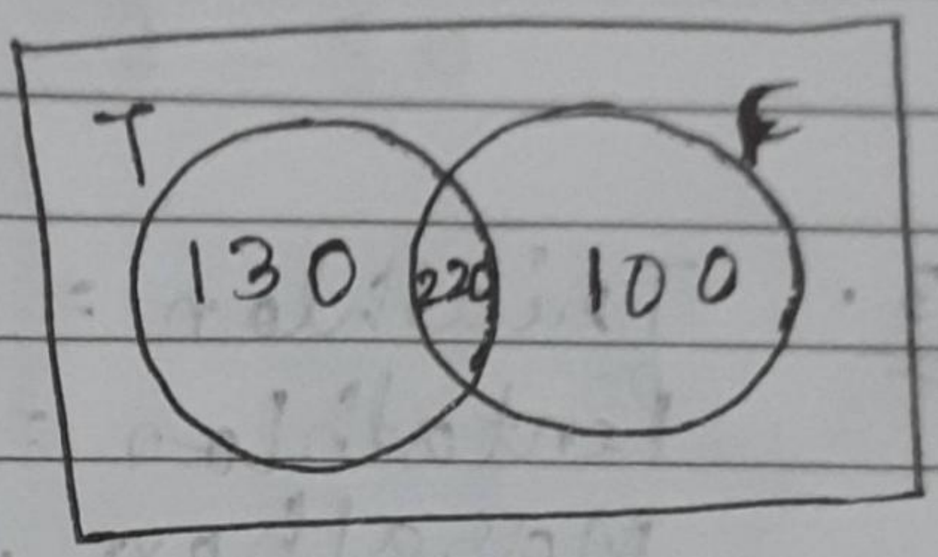
SETS ASSIGNMENT

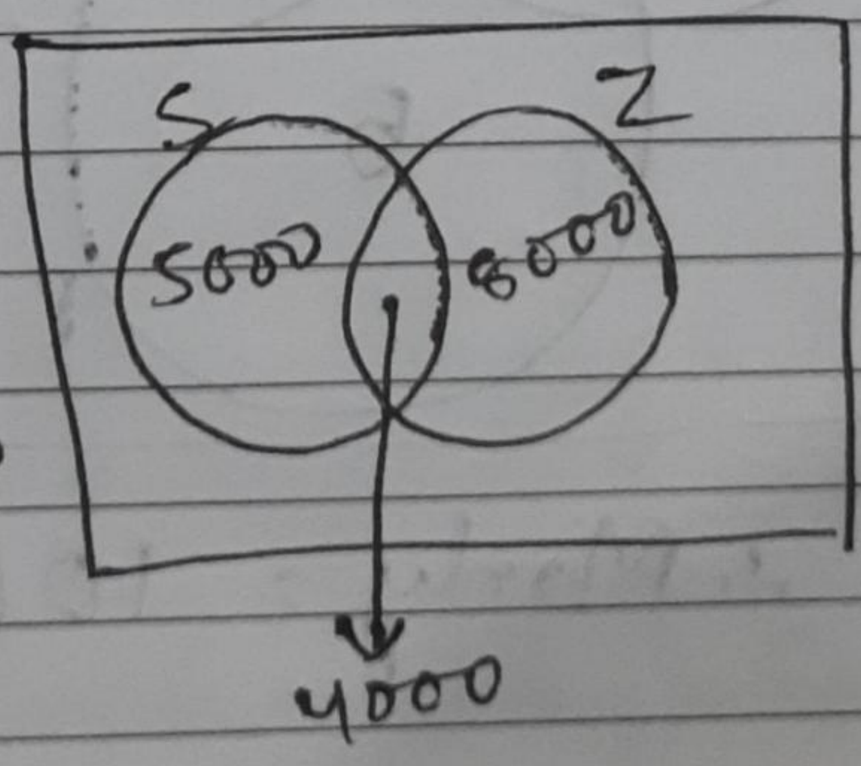
Tuesday 11
Day (101-264)

Q1. Total =>
Tambola = 350 = T
fete = f = 320
T ∩ F = 220



∴ Total members = 130 + 220 + 100
= 450 (Ans)

Q2. Total = 20000
Star TV = S = 9000
Zee TV = Z = 12000
S ∩ Z = 4000



∴ Sonly = 9000 − 4000 = 5000

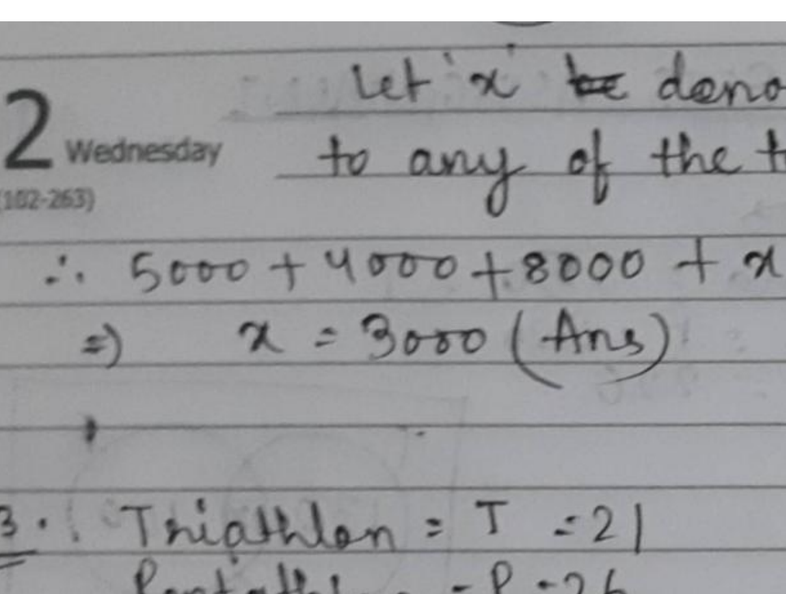
12 Wednesday
Day (102-263)

Let 'x' ~~be~~ donot subscribe to any of the two.

$\therefore 5000 + 4000 + 8000 + x = 20000$

$\Rightarrow x = 3000$ (Ans)

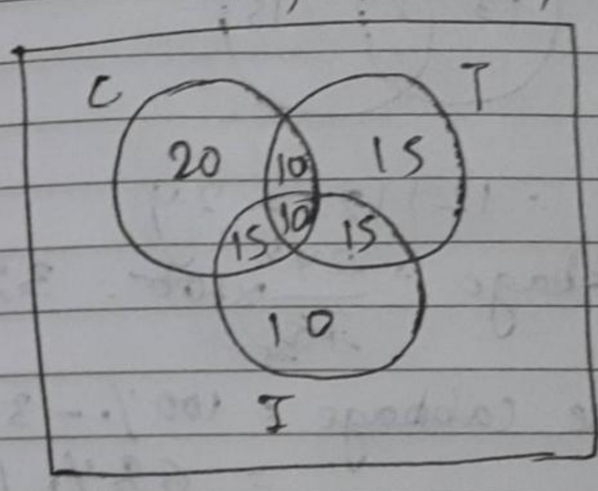
Q3. Triathlon = T = 21
Pentathlon = P = 26
Marathon = M = 29
$T \cap P = 14$, $M \cap T = 12$, $P \cap M = 15$
$T \cap P \cap M = 8$



$\therefore$ Monly. = 10 (Ans)

Q4. Coffee = C
Tea = T
Ice Cream = I
$C \cup T \cup I = 10$
$C \cap T = 20$, $I \cap C = 25$, $T \cap I = 25$
$C = 55$, $T = 50$, $I = 50$

Thursday 13
Day (103-262)

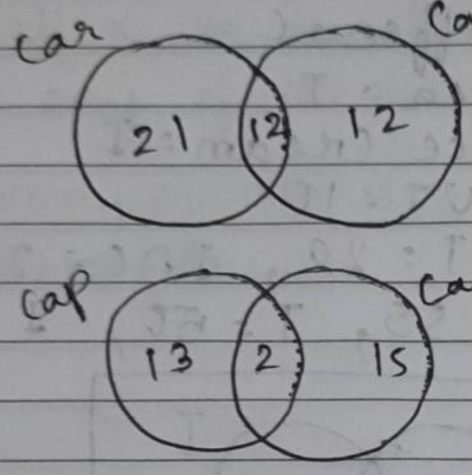


Conly - Tonly = 10
$\Rightarrow \% = \frac{10}{10} \times 100$
$= 100\%$
(Ans)

Q5. Bananas (only) = 31 (Ans)

Q6. Total = 75
Cabbage (only) = $C_{only} = 12$
Cauliflower (only) = $Ca_{only} = 15$
Carrot (only) = $Cr_{only} = 21$
$C_{TC} \cap C = 12$, Capsicum (only) = $Cp_{only} = 13$
$Cp \cap Ca = 2$

14 Friday
Day (104-261)



like cabbage = 12+12 = 24

∴ % like cabbage = $\frac{24}{75_3} \times 100$ = 32%

% donot like cabbage = 100% - 32%
= 68% (Ans)

Your are the only real obstacle in your path to a

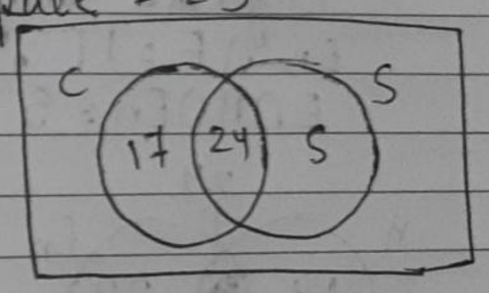
multiplex

Saturday 15
Day (105-260)

Q7. Rural either farmers or rich but not both =
14 + 22 = 36 (Ans)

Q8. Cricket = Cricket = 17
Squash (S)
C ∩ S = 24
Total = 68
Donot participate = 23

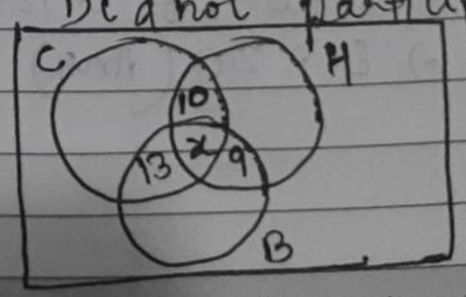
~~∴ 17+24+S+23~~



∴ 17 + 24 + S + 23 = 68
⇒ S = 68 - 64 = 4 (Ans)

Sunday 16

Q9. Total = 160
Cricket = C, Hockey = H, Badminton = B
Didnot participate = 57



C+H+B = 37

Attempt the impossible in order to improve your

multiplex

17 Monday
Day (107-258)

~~∴ C+H+B~~

$\therefore 37+57+x=160$

$\Rightarrow x=160-126=34$ (Ans)

Q10. Total = 100

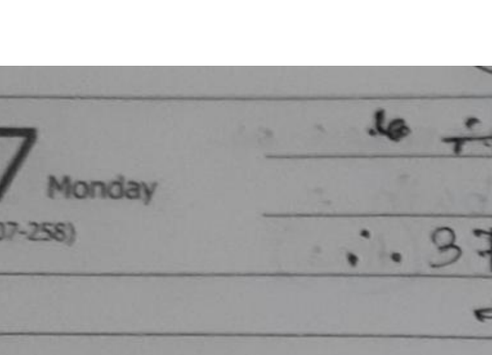
History = ~~Ho~~ Honly = 14

Economics = ~~Eonly~~ En

English = Eonly = 24

$En \cap E = 11$, $E \cap H = 12$, $H = 50$

$E \cap H \cap En = 5$

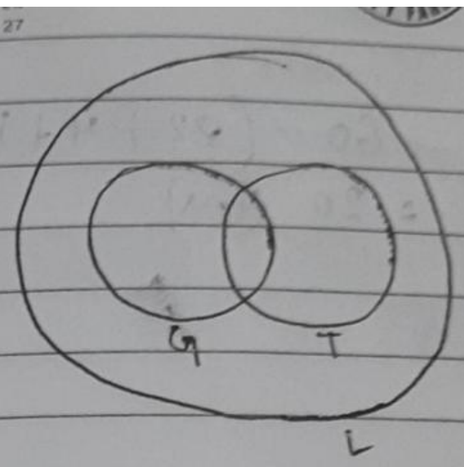


$\therefore 14+24+24+7+5+6+E=100$

$\Rightarrow E=100-80 \Rightarrow E=20$ (Ans)

Tuesday 18
Day (108-257)

Q11.



Q12. $x^2+x+2=0$

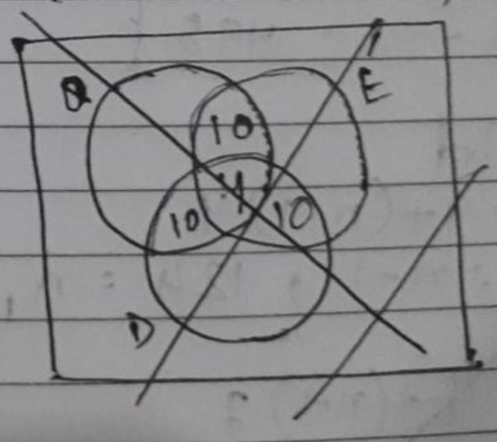
$x=\frac{-1\pm\sqrt{1-8}}{2}=\frac{-1\pm\sqrt{-7}}{2}$

$x=\{\ \}$

Q13. Quiz = Q, Extempore = E, Debate = D

$Q \cup E = 22$,

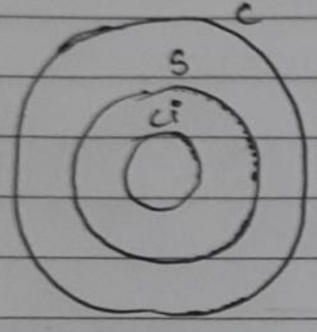
$Q \cap E \cap D = 4$, Total = 60



19 Wednesday
Day (109-256)

Donby = 60 − (32 + 4 + 14)
= 20 Ans

Q14.



Q15. A = {3, −3}
A = {x : x is an integer & $x^2 - 9 = 0$}

Q16. P = {4, 8, 12 - - - , 496}
Q = {7, 21 - - - - , 497}
R = {6, 12, 18 - - - 498}

$T_n = a + (n-1)d$
for P, 496 = 4 + (n − 1) 4
$\Rightarrow \frac{492}{4} = n - 1 \Rightarrow 124 = n_1$
Q, 497 = 7 + (n − 1) 7
$\Rightarrow \frac{490}{7} = n - 1 \Rightarrow n_2 = 71$

R, 498 = 6 + (n − 1) 6
$\Rightarrow \frac{492}{6} = n - 1 \Rightarrow n_3 = 83$

Thursday 20
Day (110-255)

∴ P∪Q∪R = 124 + 71 + 83
= 278 (Ans)

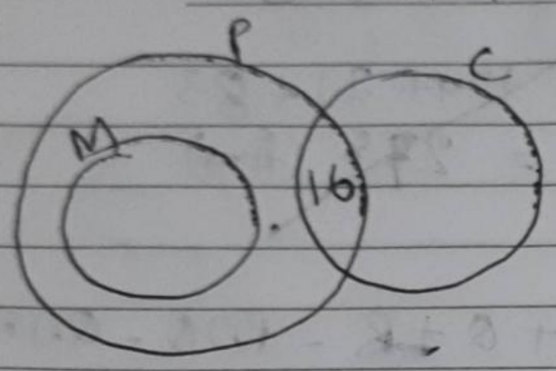
$P \cup Q \cup R = P + Q + R - P \cap Q - Q \cap R - R \cap P + P \cap Q \cap R$

P = 125 − 1 = 124
Q = 36 {7, 14, 21 - - - 497 = 7 × 71}
R = 83
$P \cap Q = 0$, $Q \cap R = 0$, $P \cap Q \cap R = 0$
$P \cap R \Rightarrow$ 12, 24, 36 - - - 492
$\Rightarrow P \cap R = 41$

∴ $P \cup Q \cup R = 124 + 36 + 83 - 41$
= 243 − 41 = 202 Ans

21 Friday
Day (111-254)

Q17. $M \cap C = 0$, $P \cap C = 16$.
Total = 60



~~P+C > M+16~~ Ponly + Monly + Conly + 16
~~P+C+M =~~ = 60

$\Rightarrow$ Ponly + Monly + Conly = 44

Ponly + Conly > Monly + 16

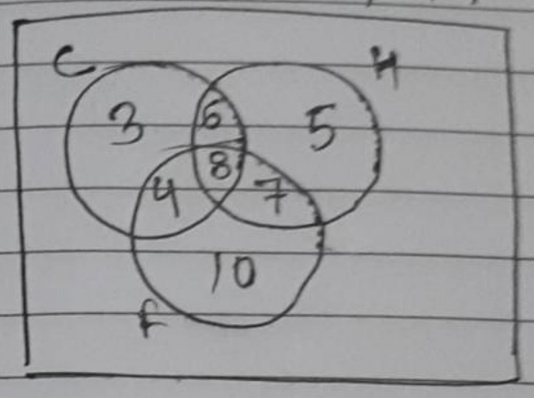
for Cmin, $C = 0 \Rightarrow P + M = 44$ & $P > M + 16$

$\therefore$ Let P = 38, M = 6

Cmax, $C = 44 \Rightarrow P + M + C = 44$ & $P + C > M + 16$
(P = 0 & M = 0)

$\therefore [44, 0]$ (Ans).

Q18. C = 21, H = 26, F = 29
$H \cap C = 14$, $H \cap F = 15$,
$F \cap C = 12$, $H \cap C \cap F = 8$



$\therefore$ Total = 18 + 25 = 43 (Ans)

Saturday 22
Day (112-253)

Q19. Not a well defined collection

Q20. Total = 30, N = 12, P = 16, H = 18.
$N \cap P \cap H = 0$

$N \cup P \cup H = N + P + H - N \cap P - P \cap H - H \cap N + N \cap P \cap H$

Sunday 23

$\Rightarrow 30 = 46 - N \cap P - P \cap H - H \cap N$

$\Rightarrow N \cap P + P \cap H + H \cap N = 16$ (Ans)