$0.03 \times 0.03 \times 0.992 + 0.08 \times 0.08 \times 0.008$

$= \underline{0.0076832}$

$0.0008928 + 0.0076832$

Q1

Tot outcomes = 36

Die 1 → 6 (6) 6 (6) 6 (6) Die 1 → 1 (2) 3 (4) 5 (6)

Die 2 → 1 (2) 3 (4) 5 (6) Die 2 → 6 (6) 6 (6) 6 (6)

P(Sum is even and on die show 6) = 6/36

= 1/6

Q2

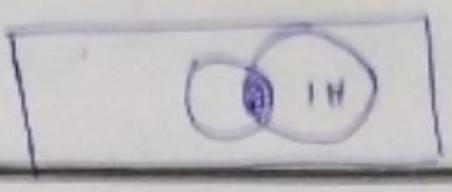
D_1 / D_2	1	2	3	4	5	6
1	.	.	.	.	.	
2	.	.	.	.		
3	.	.	.			
4	.	.				
5	.					
6						

P(Sum of no. is less than 7)

= 15/36

= 5/12

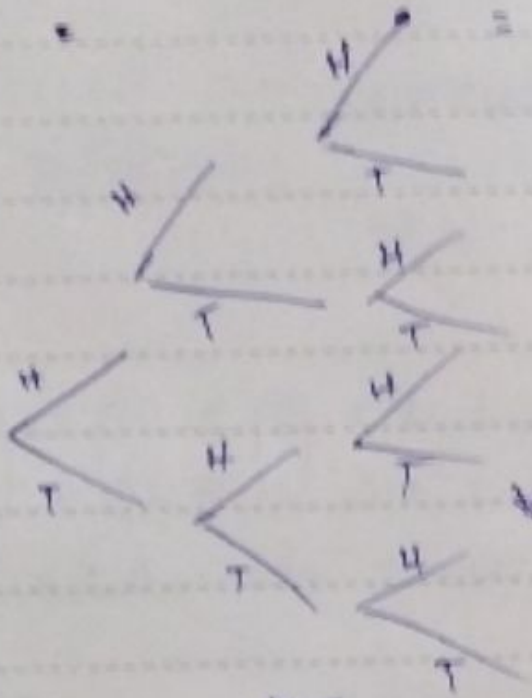
DATE



Q3 H T H H T H T T
H H T H T T H T
H H H T T T T H

P(Atleast 2H / Atleast 1H)

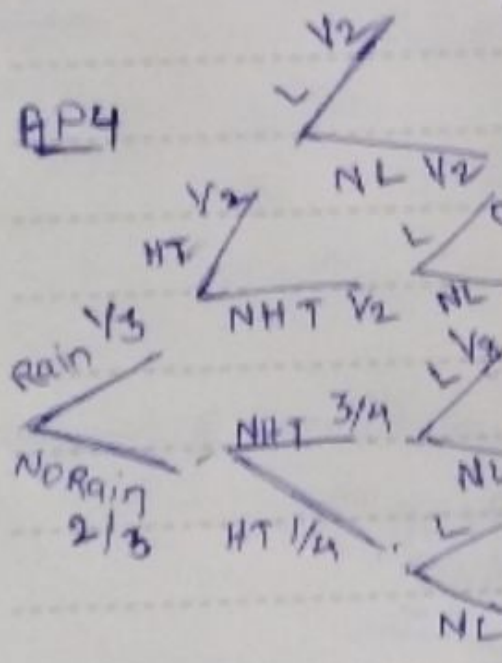
= P(2H atleast) × P(atleast 1H)
P(Atleat 2H)



= 4/8 × 7/8
4/8

= 7/8

Q4



P(No Rain, Heavy Traffic, and No Late)

= 2/3 × 1/4 × 0.75

= 1/6 × 1/2 × 75/100 3/4

a = 1/8

1/3 · 1/3 = 1/9

P(Being Late) = P(R; HT; L) + P(R; NT; L) + P(NR; NT; L) + P(NR; HT; L)

= 1/12 + 1/24 + 1/16 + 1/16

b = 0.25 or 1/4

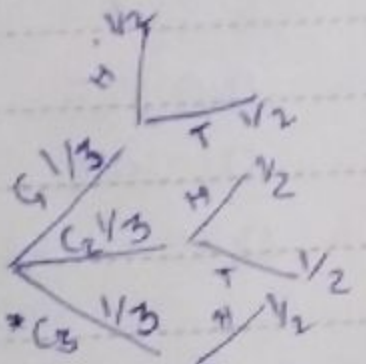
$$P(\text{Rain} / \text{Late}) = \frac{P(L/R) \times P(R)}{P(L)}$$

$$= \frac{0.125 \times 1/3}{0.25}$$

$$= \frac{125}{25} \times \frac{1}{3} \times \frac{1000}{1000}$$

c = 1/6

AQ5



P(H) = 1/3 · 1/2 + 1/3 × 1/2 + 1/3

= 1/6 + 1/6 + 1/3

a = 0.67

P(2 headed / H)

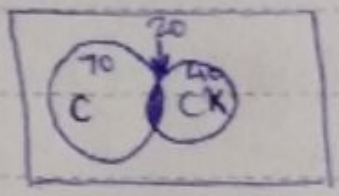
$$= \frac{P(H/2 \text{ headed}) \times P(2 \text{ headed})}{P(H)}$$

$$= \frac{1/3 \times 1/3}{0.67} = 0.16 = \frac{16}{100} = \frac{4}{25}$$

b = 4/25

DATE:

AP6

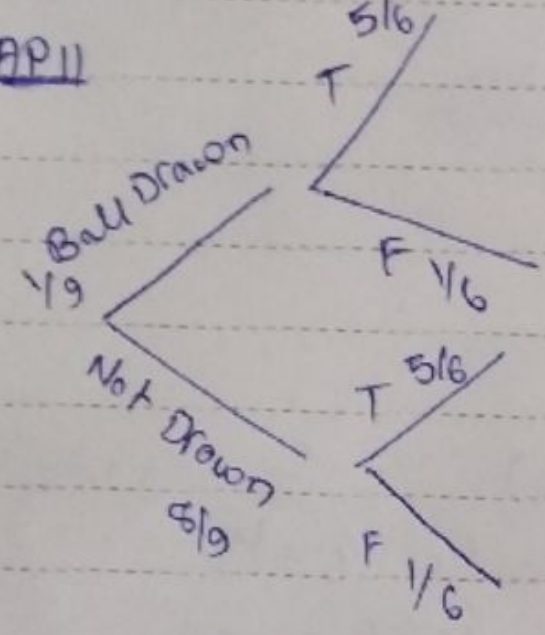


$$P(\text{coffee/cake}) = \frac{P(\text{cake/coffee}) \cdot P(\text{coffee})}{P(\text{cake})}$$

$$= \frac{0.2 \times 0.7}{0.14_2 * 10}$$

$$= 7/20 = 0.35$$

AP11



P(White Ball was drawn)

$$= \frac{5/6 \cdot 1/9}{5/6 \cdot 1/9 + 8/9 \cdot 1/6}$$

$$= \frac{0.0925}{0.2406}$$

$$= 0.38 = \frac{38}{100} = \frac{19}{50}$$

$$= 19/50$$