Quiz-1
Math 4441

09-10-20

ID: 1800411 20

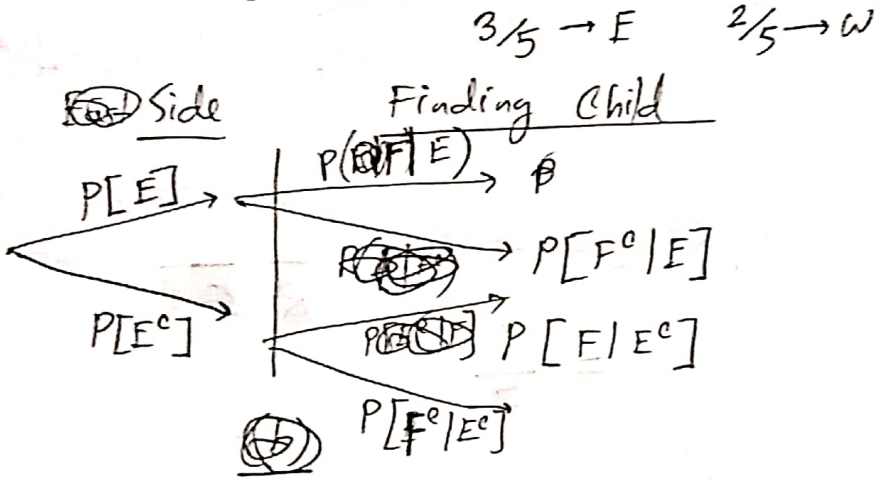
Ans. to Q.no. 1

Probability of being lost in East, $P[E] = P$

" " " " " West, $P[W] = 1-P$

(a)

$P[E] \rightarrow$ East
$P[E^c] \rightarrow$ West
$P[F] \rightarrow$ Found
$P[F^c] \rightarrow$ Not found



$$P[F] = P[F|E] \cdot P[E] + P[F|E^c] \times P[E^c]$$
$$= P \times 0.4 \times \frac{3}{5} + (1-P) \times 0.4 \times \frac{2}{5}$$

P = Value of P is rightmost 2 digits of student ID which is 20. No other info was given.

I'm guessing it is 1/20.

(a) $P[F] = 1/20 + 0.40 \times 3/5 + (1 - 1/20) \times 0.4 \times 2/5.$

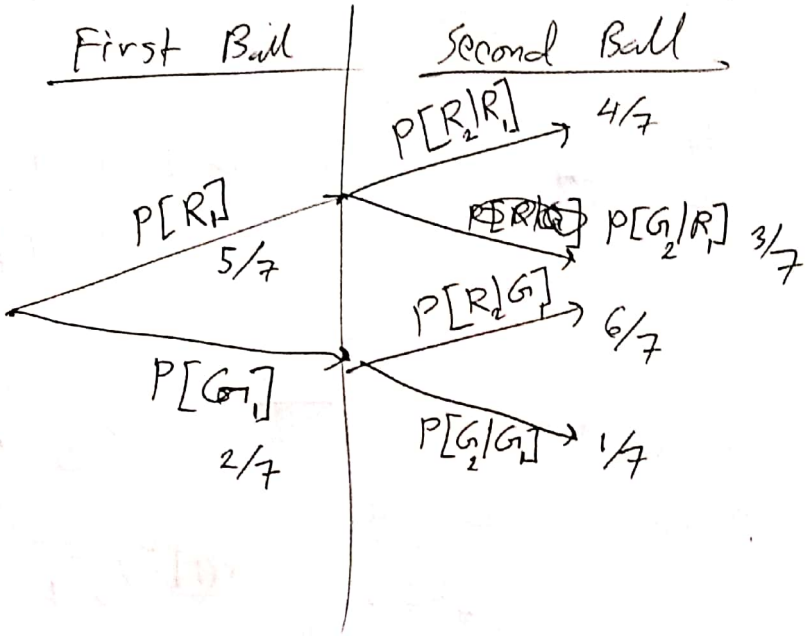
(b) $P[F|E] = 0.4 \times 3/5 = 0.24$ (Ans.)

(2+ID) mod 3? that's what I heard.

Ans. to Q.no. 2(a)

5 red and 2 green balls = 7 balls

P[R] P[G]



$P[R|R] = \frac{}{\bar{R}\ \bar{R}R}$

$= \frac{4}{7}$

$P[R|G] = \frac{6}{7}$

(a) So, probability is $P[R_1] \times P[R_2|R_1] + P[G_1] \times P[R_2|G_1]$

$= \frac{5}{7} \times \frac{4}{7} + \frac{2}{7} \times \frac{6}{7}$

$= \frac{32}{49}$ (Ans.)

~~(b) Probability is~~ Second ball being Red is 32/49

" " " Green is $(1 - 32/49) = 17/$

(b) $P[R_2|R_1] = 4/7$ (Ans.)