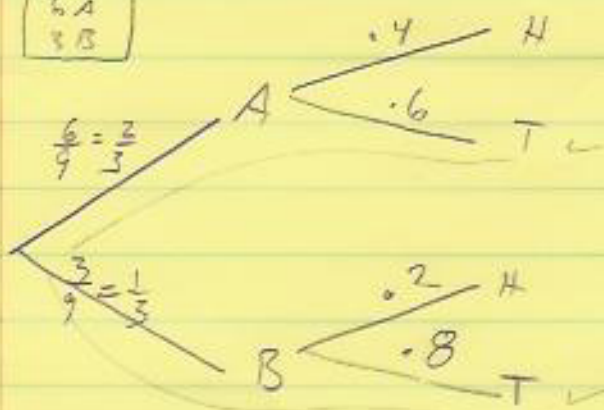


3.

$$\begin{bmatrix} 6A \\ 3B \end{bmatrix}$$



$$P(A | T) = \frac{P(A \cap T)}{P(T)} = \frac{\frac{2}{3} \cdot (.6)}{\frac{2}{3} \cdot (.6) + \frac{1}{3} \cdot (.8)}$$

$$= \frac{2(.6)}{2(.6) + 1(.8)} = \frac{3}{3+2} = \boxed{\frac{3}{5}}$$

4.

$$\begin{bmatrix} 70R \\ 20G \\ 10B \end{bmatrix} \text{ pick 6}$$

$$P(R, G, R, B, G, R)$$

$$= \frac{70}{100} \cdot \frac{20}{99} \cdot \frac{69}{98} \cdot \frac{10}{97} \cdot \frac{19}{96} \cdot \frac{68}{95}$$

5.

$$P(4P, 3M, 2Y) = \binom{\# \text{ ways to arrange}}{4P, 3M, 2Y} \cdot P(\text{one way to pick } 4P, 3M, 2Y)$$

$$= \boxed{\frac{9!}{4! 3! 2!} (.0002)}$$

(2)