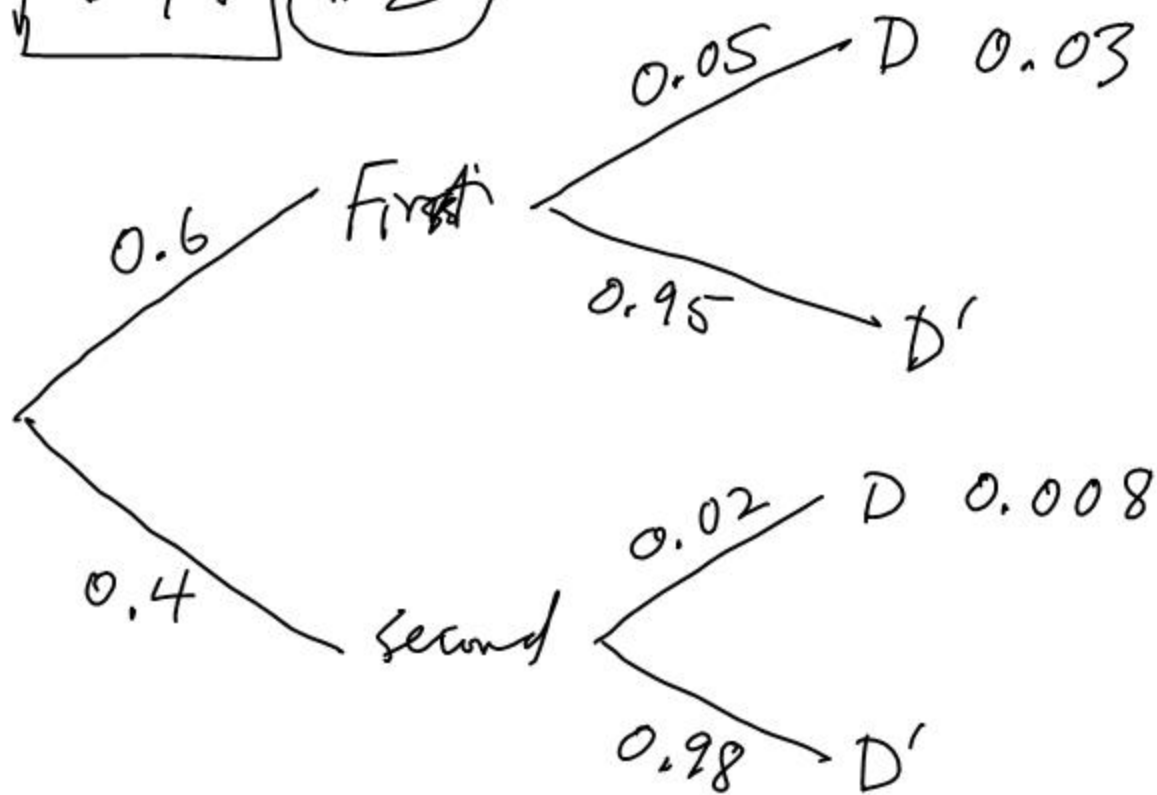


6M #2



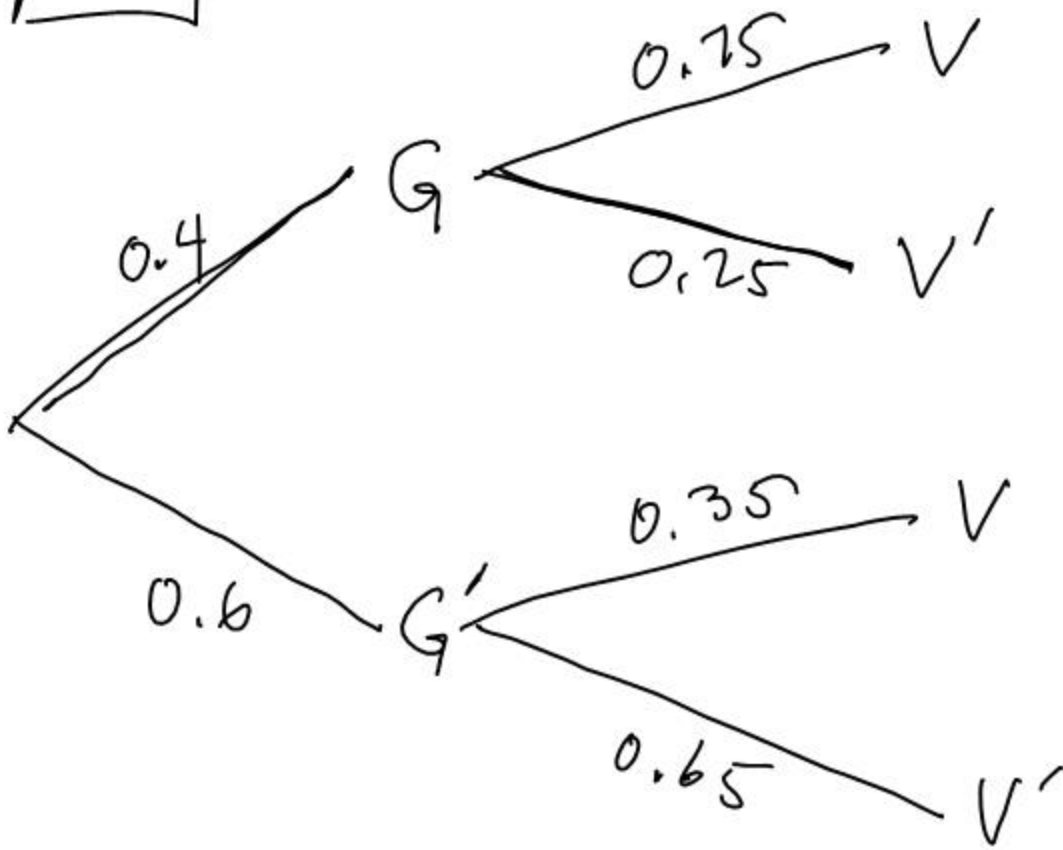
$$P(D) = \underline{0.03} + \underline{0.008} = 0.038$$

$$P(\text{First} \mid \text{defective}) = \frac{P(\text{First} \cap D)}{P(D)}$$

$$= \frac{(0.6)(0.05)}{(0.6)(0.05) + \underline{(0.4)(0.02)}}$$

$$= 0.789$$

#3

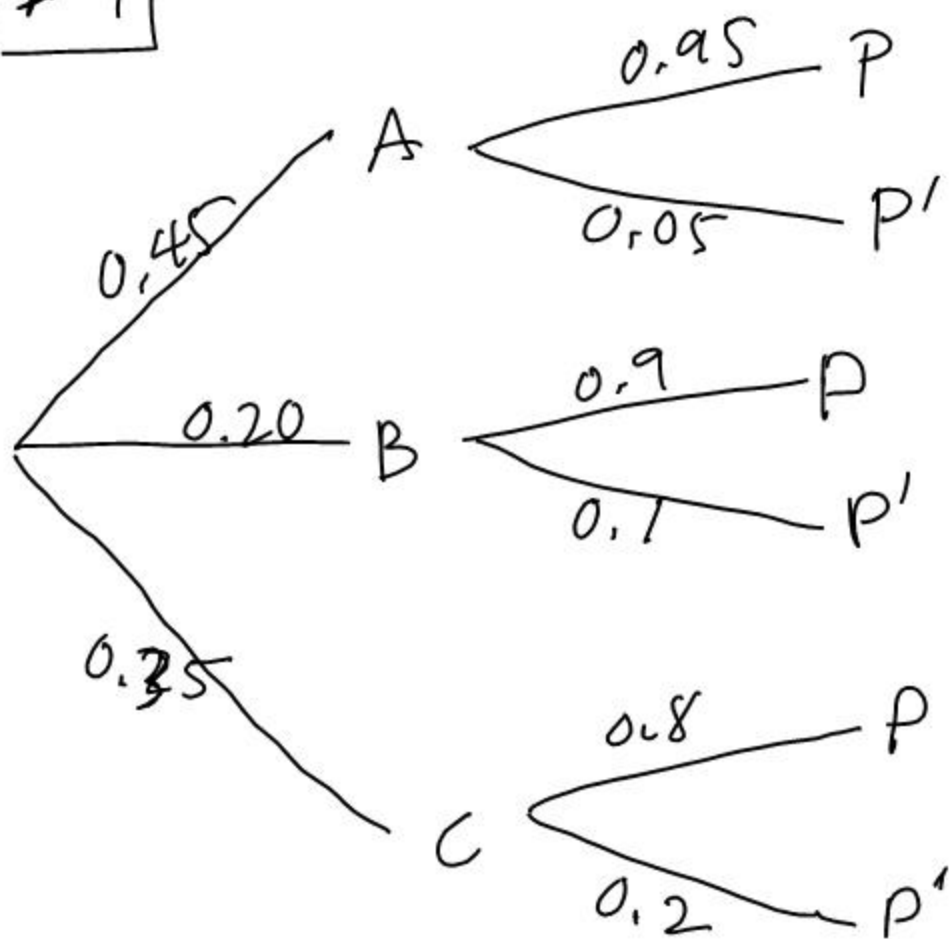


$$P(V) = (0.4)(0.75) + (0.6)(0.35) = 0.51$$

$$P(V'/G) = \frac{P(V' \cap G)}{P(G)}$$

$$= \frac{(0.4)(0.25)}{0.4} = 0.25$$

9

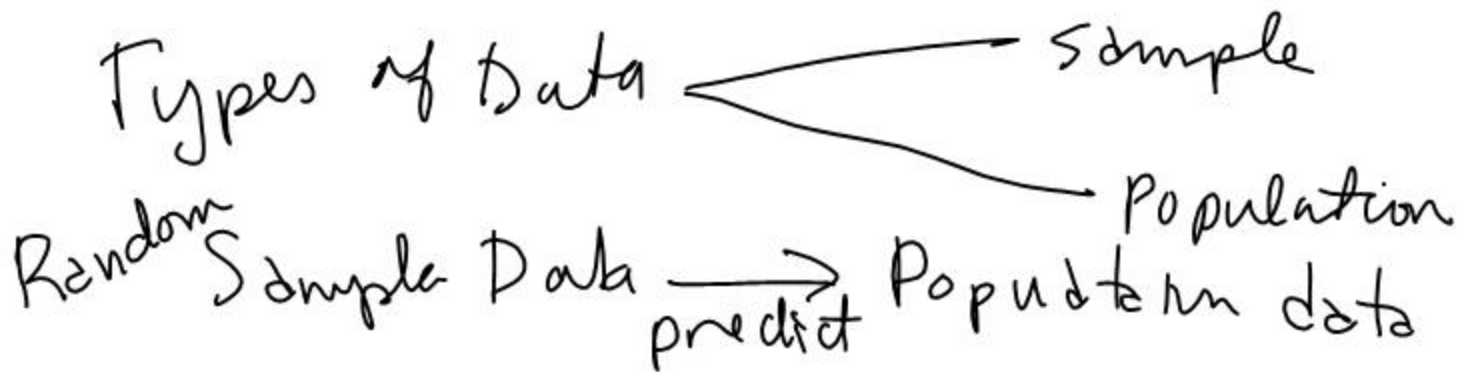
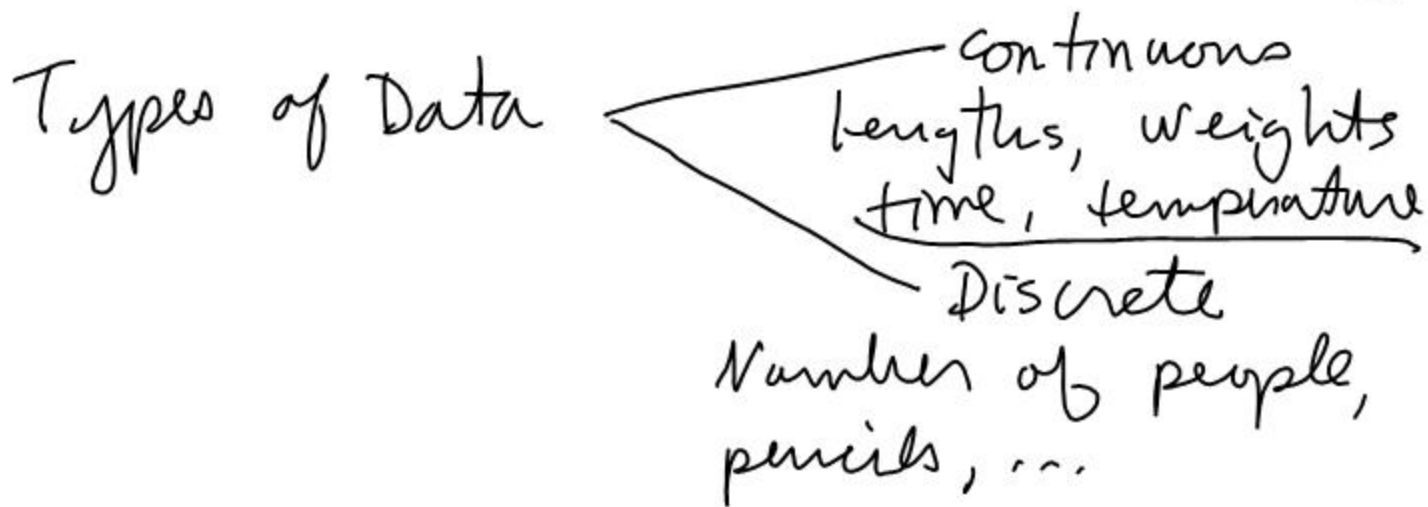


$$\begin{aligned} \text{(a) } P(P) &= (0.45)(0.95) + (0.2)(0.9) + (0.35)(0.8) \\ &= 0.8875 \text{ (or, } 0.888) \end{aligned}$$

$$\begin{aligned} \text{(b) } P(A|P) &= \frac{P(A \cap P)}{P(P)} = \\ &= \frac{(0.45)(0.95)}{(0.45)(0.95) + (0.2)(0.9) + (0.35)(0.8)} \\ &= 0.482 \end{aligned}$$

(c)

$$\begin{aligned} P(B/P') &= \frac{P(B \cap P')}{P(P')} \\ &= \frac{(0.2)(0.1)}{(0.2)(0.1) + (0.45)(0.05) + (0.35)(0.2)} \\ &= \frac{P(B) P(P'|B)}{P(B) P(P'|B) + P(A) P(P'|A) + P(C) P(P'|C)} \\ &= 0.027 \end{aligned}$$



## Measures of Central Tendency

Median  
Mean  
Mode

HW 6M

# 4 - 6, 10

## Measures of Dispersion (Spread)

- Range = Max - Min
- Variance = average of the squared deviations

↑  
how far a data point is from the mean

- Standard Deviation =  $\sqrt{\text{Variance}}$