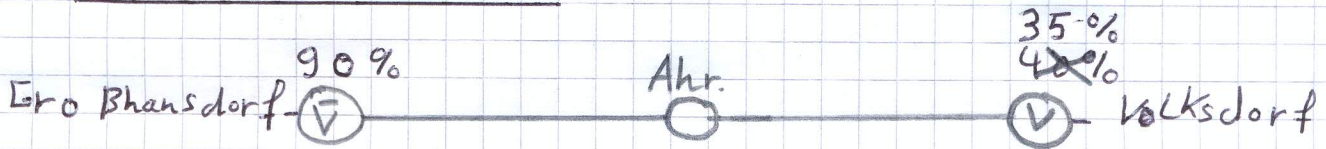


Satz von Bayes Protokoll

Übungsaufgaben:



$$P(V) = 0,6$$

$$P(\bar{V}) = 0,4$$

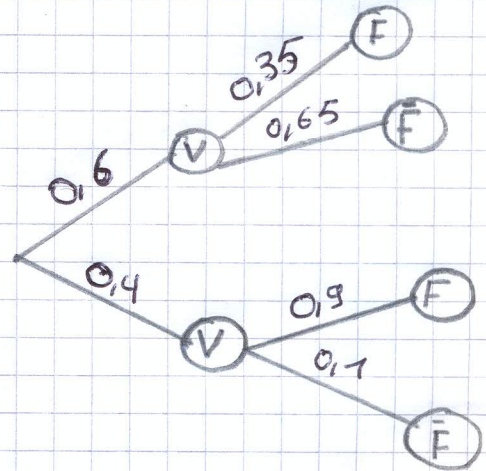
F: er trifft F an

$$P_V(F) = 0,35$$

$$P_{\bar{V}}(F) = 0,9$$

gesucht:

$$P(F) = P_V \cdot P_V(F) + P_{\bar{V}} \cdot P_{\bar{V}}(F) \\ = 0,21 + 0,36 = 0,57$$



$$P(V) \cdot P_V(F) = 0,6 \cdot 0,35 = 0,21$$

$$P(\bar{V}) \cdot P_{\bar{V}}(F) = 0,4 \cdot 0,9 = 0,36$$

$$P_V(F) = \frac{P(V) \cdot P_V(F)}{P(F)} = \frac{0,21}{0,57} = 0,368 \\ = 36,8\%$$

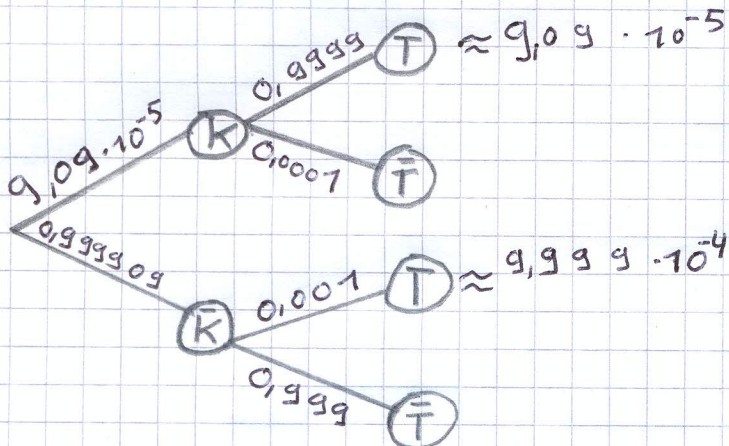
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K: hat Krankheit $P(K) = \frac{100}{1000000} = 9,09 \cdot 10^{-5}$

T: Test positiv

$$0,01\% = 0,0001$$

$$0,1\% = 0,001$$



Gesucht:

$$P_T(K) = \frac{P(K) \cdot P_K(T)}{P(T)}$$

$$= \frac{9,09 \cdot 10^{-5}}{9,09 \cdot 10^{-5} + 9,999 \cdot 10^{-4}}$$

$$= 0,08333$$

$$= 8,33\%$$