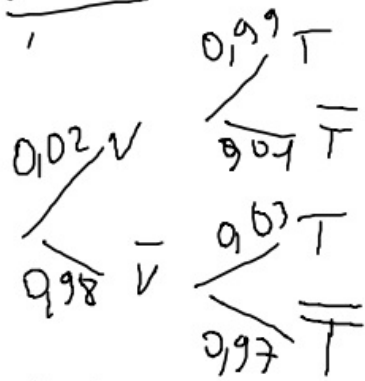


Ex 023



$$\left(\begin{array}{l} P(V) = 0,02 \\ P(T) = 0,99 \\ P_{\bar{V}}(\bar{T}) = 0,97 \end{array} \right.$$

2) La formule des probas totales montre que

$$P(T) = P(T \cap V) + P(T \cap \bar{V}) = P(V)P(T) + P(\bar{V})P(T)$$

$$= 0,02 \times 0,99 + 0,998 \times 0,97 = 0,9992$$

3) a) $P_T(V) = \frac{P(T \cap V)}{P(T)} = \frac{P(V)P(T)}{P(T)} = \frac{0,02 \times 0,99}{0,9992}$

$$= 0,02004 \text{ } \tilde{a} \text{ } 10^{-2} \text{ } \mu\text{s}$$

Ce qui coïncide avec l'affirmation.

b) $P_{\bar{T}}(\bar{V}) = \frac{P(\bar{T} \cap \bar{V})}{P(\bar{T})} = \frac{P(\bar{V})P(\bar{T})}{P(\bar{T})} = \frac{0,998 \times 0,97}{1 - 0,9992} = 0,9998$

$$\tilde{a} \text{ } 10^{-4} \text{ } \mu\text{s}$$

B) 1) X suit $B(10; 0,02)$

2) $P(X > 2) = 1 - P(X \leq 2) = 1 - 0,9838$

$$= 0,0162 \text{ } \tilde{a} \text{ } 10^{-4} \text{ } \mu\text{s}$$