

ES 1

$T = \text{atta}$        $D = \text{decesp.}$   
 $T^c = \text{compagne}$        $D^c = \text{no decesp.}$

$$\left. \begin{array}{l} P(D^c | T) = 0.96 \\ P(T^c | D) = 0.85 \\ P(T) = 0.92 \end{array} \right\} \begin{array}{l} P(D \cap T) = ? \\ P(D) = ? \end{array}$$

$$P(D^c | T) = \frac{P(D^c \cap T)}{P(T)} \Rightarrow (0.96) P(T) = P(D^c \cap T) \quad P(D^c \cap T) = 0.88$$

$$P(T) = P(T \cap D) + P(T \cap D^c) \Rightarrow P(T \cap D) = 0.92 - 0.88 = \boxed{0.04}$$

$$P(T^c | D) = \frac{P(T^c \cap D)}{P(D)} \quad (0.85) P(D) = P(T^c \cap D)$$

$$P(D) = P(D \cap T) + P(D \cap T^c) = 0.04 + (0.85) P(D)$$

$$P(D) = \frac{0.04}{0.15} = \boxed{0.26}$$

ES 2

$$P(\text{prendre } 2, 4, 7, 8) = \frac{1}{\binom{10}{4}} = \frac{1}{210}$$

$$\binom{10}{4} = \frac{10!}{4!6!} = \frac{10 \cdot 9 \cdot 8 \cdot 7}{4 \cdot 3 \cdot 2 \cdot 1} = 210$$

$$P(\text{prendre } \text{pomi}) = \frac{\binom{5}{2}}{\binom{10}{4}} = \frac{5}{210}$$

ES 3

$\boxed{5 | 7 | 7 | 3 | 6}$

$$P = \frac{1}{\binom{5}{1} 9 \binom{4}{2} 8 \cdot 7} = \frac{1}{5 \cdot 9 \cdot 6 \cdot 8 \cdot 7} = \frac{1}{15120}$$