

1)

$$A) \frac{500}{1000} = 0,5 \quad (B \cap E) = 0,5 \times 100 = 5\%$$

$$B) \frac{100}{1000} = 0,1 \quad P(E \cap B) = 1\%$$

$$C) P(E' \cap B) = P(E') + P(B) - P(E' \cap B) = \frac{400}{1000} + \frac{800}{1000} - \frac{300}{1000} = \frac{900}{1000} = 0,9 = 9\%$$

$$D) P(E' \cup B') = P(E') + P(B') - P(E' \cap B') = \frac{400}{1000} + \frac{200}{1000} - \frac{100}{1000} = \frac{500}{1000} = 0,5 = 5\%$$

2)

$$a) P = \frac{\text{casos F.}}{\text{totales}} = \frac{241}{2200} = 0,428 = 42,8\%$$

$$b) \frac{764}{2200} + \frac{1493}{2200} = 0,34 + 0,67 = 34\% + 67\% = 101\%$$

3)

$$a) P(5) = 0,3$$

$$b) P(2) = 0,3$$

$$c) P(5 \cup 2) = 0,3 + 0,3 - 0,1 = 0,5$$

$$d) P(2/5) = \frac{0,1}{0,3} = 0,33$$

4) $P(A) = 0,50$

$P(B|A) = 0,40$

$P(A \cap B) = ?$

$$P(B|A) = \frac{P(A \cap B)}{P(A)}$$

$$0,40 = \frac{P(A \cap B)}{0,50} \rightarrow (0,40)(0,50) = P(A \cap B)$$

$$0,2 = P(A \cap B)$$

5) $P(D|N) = \frac{P(D \cap N)}{P(N)} = \frac{50\%}{70\%} = 0,71 = 71\%$

6)

a) $P_A \cdot P_B = P(C)$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ 0,7 \times 0,8 & = & 0,56 = 56\% \end{array}$$

b) $\begin{array}{l} P_1 = 0,1 \\ P_2 = 0,2 \end{array} \rightarrow \begin{array}{l} P_1 = 0,3 \\ P_2 = 0,8 \end{array}$

$$(0,7)(0,2) + (0,3)(0,8) = 0,38 = 38\%$$