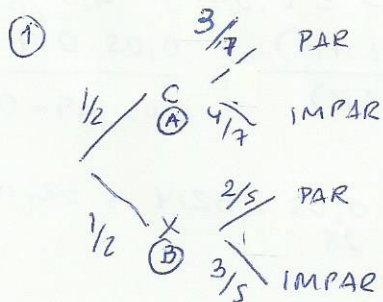


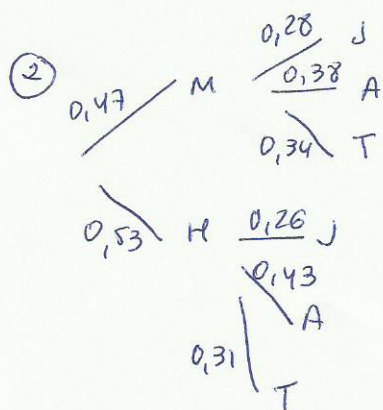
TEMA 13. PROBABILIDAD



a) $P(A \cap \text{Par}) = \frac{1}{2} \cdot \frac{3}{7} = \frac{3}{14}$

b) $P(\text{Par}) = \frac{1}{2} \cdot \frac{3}{7} + \frac{1}{2} \cdot \frac{2}{5} = \frac{3}{14} + \frac{2}{10} = \frac{29}{70}$

c) $P(A/\text{Par}) = \frac{P(A \cap \text{Par})}{P(\text{Par})} = \frac{3/14}{29/70} = \frac{15}{29}$



a) $P(M \cap T) = 0,47 \cdot 0,34 = 0,1598 = 15,98\%$

b) $P(T/M) = \frac{P(T \cap M)}{P(M)} = \frac{0,1598}{0,47} = 0,34 = 34\%$

c) $P(H/T) = \frac{P(H \cap T)}{P(T)} = \frac{0,53 \cdot 0,31}{0,47 \cdot 0,34 + 0,53 \cdot 0,31} = \frac{0,1643}{0,3241} = 0,5069 = 50,69\%$

③ $P(A) = 0,2$
 $P(A \cap B) = 0,16$ $P(A \cap B) = P(A) \cdot P(B)$
 a) $P(\overline{A \cap B}) = P(\overline{A \cup B}) = 1 - P(A \cup B) = 1 - [P(A) + P(B) - P(A \cap B)] =$
 $= 1 - [0,2 + 0,8 - 0,16] = 1 - 0,84 = \underline{0,16}$

$P(A \cap B) = P(A) \cdot P(B) \rightarrow P(B) = \frac{P(A \cap B)}{P(A)} = \frac{0,16}{0,2} = 0,8$

b) $P(A/\overline{B}) = \frac{P(A \cap \overline{B})}{P(\overline{B})} = \frac{P(A) - P(A \cap B)}{1 - P(B)} = \frac{0,2 - 0,16}{1 - 0,8} = \frac{0,04}{0,2} = \underline{0,2}$

c) $P(B \cap \overline{A}) = P(B) - P(B \cap A) = 0,8 - 0,16 = \underline{0,64}$

④

	E	\overline{E}	
I	10	20	30
\overline{I}	10	60	70
	20	80	100

a) $P(I \cup E) = P(I) + P(E) - P(I \cap E) =$
 $= \frac{30}{100} + \frac{20}{100} - \frac{10}{100} = \frac{40}{100} = 40\%$

b) $P(I/E) = \frac{P(I \cap E)}{P(E)} = \frac{10/100}{20/100} = \frac{10}{20} = 0,5 = 50\%$

c) $P(\text{Sob ma}) = P(E \cap \overline{I}) + P(\overline{E} \cap I) =$
 $= \frac{10}{100} + \frac{20}{100} = \frac{30}{100} = 30\%$