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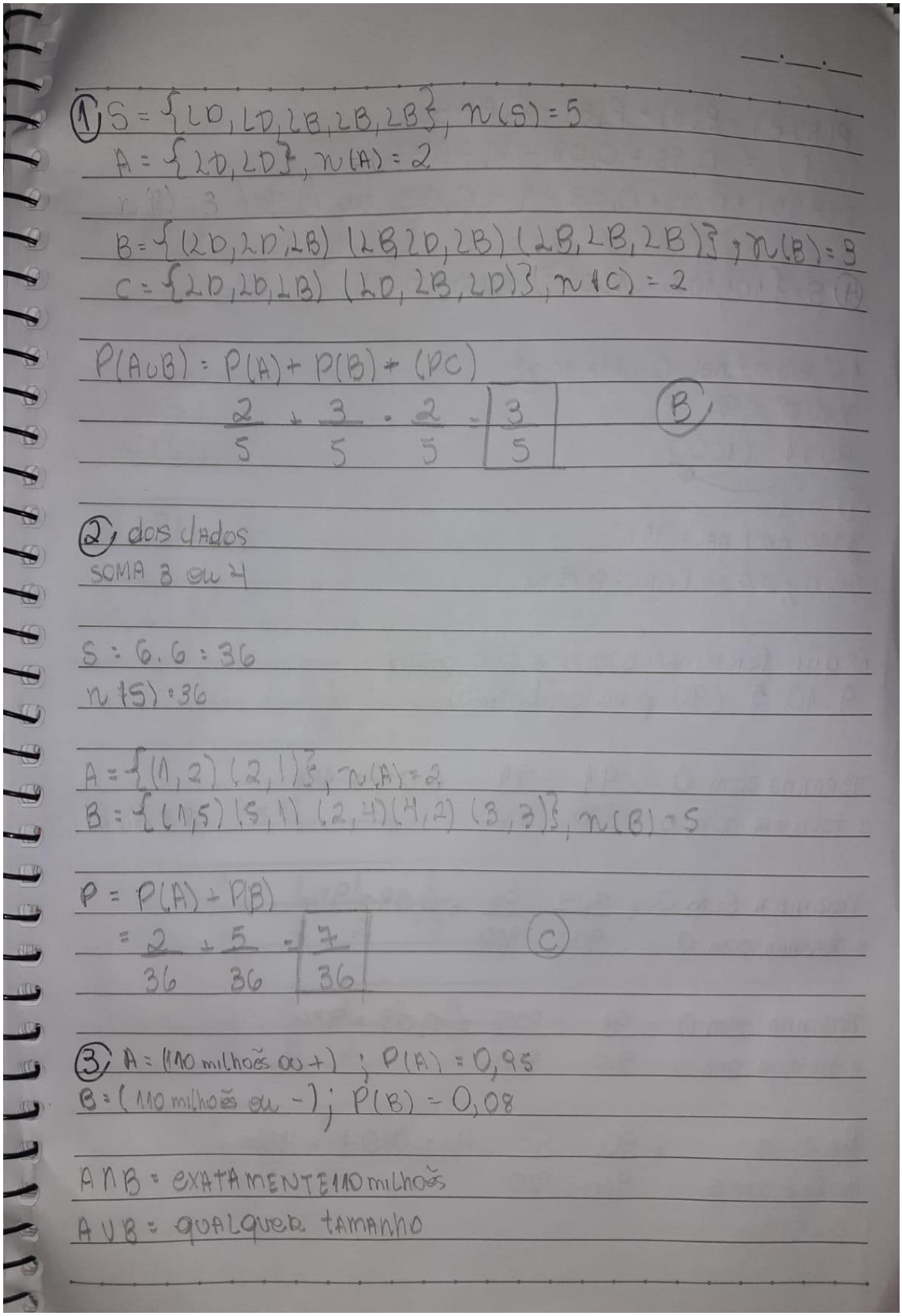
CTII348

Probabilidade II



$P(A \cup B) = P(A) + P(B) - P(A \cap B$

$1 = 0,95 + 0,08 - P(A \cap B)$

$P(A \cap B) = 0,95 + 0,08 - 1 = 0,03$ ou 3%

(H) $S = \{101, 102 \ldots 1000\}$, $n(S) = 900$

1 nº tem o final 0 cada 10 nº

$900 / 10 = 90$

$90 + 1$ (1000

zero no final: 91 nº

Sem zero no final: 809 n

nº que terminam com 5 e são pares

9.10.5 (90 para cada caso)

Termina com 0 e termina com 0 : $\frac{91}{900} \cdot \frac{91}{900} = 0,01 = 1\%$

Termina sem 0 e termina com 0 : $\frac{809}{900} \cdot \frac{91}{900} = 0,09 = 9\%$

Termina com 0 e termina sem 0 : $\frac{91}{900} \cdot \frac{809}{900} = 0,09 = 9\%$

PAR e termina com 5 : $\frac{90}{900} \cdot \frac{90}{900} \cdot 4 = 0,04 = 4\%$

Termina com 5 e par $= \frac{90}{900} \cdot \frac{90}{900} = 0,04 = 4\%$

$1\% + 9\% + 9\% + 4\% + 4\% = 27\%$

$100\% - 27\% = \boxed{73\%}$

(5) LIVROS = 10

L. ENCONOMIA = 4

$n(S) = P10 = 10!$ $\quad 4 \cdot 3 \cdot 2 \cdot 1$

$n(7) = P_4 P_7 = 4!7!$

(C)

$$\frac{4!7!}{10!} = \frac{4.3.2.1.7!}{10.9.8.7!} = \frac{4.3.2.1}{10.9.8} = \frac{24}{720} = \boxed{\frac{1}{30}}$$

(6) CORES = A e B)

$X, X, X = \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{8}$

$X, X, Y = \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot 3 = \frac{3}{8}$

$X, Y, Y = \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \cdot 3 = \frac{3}{8}$

(8)

$y \cdot y \cdot y = \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} = \frac{1}{8}$

$P = \left(\frac{1}{8} \cdot \frac{1}{8}\right) + \left(\frac{3}{8} \cdot \frac{3}{8}\right) + \frac{3}{8} + \frac{3}{8} + \frac{1}{8} + \frac{1}{8}$

$P = \frac{1}{64} + \frac{9}{64} + \frac{9}{64} + \frac{1}{64} + \frac{20}{64} : \boxed{\frac{5}{16}}$ (D)

(7) 10 dias = 7 dias em alta e 3 dias em baixa

$C_{10,2} = \frac{10!}{2!(10-2)!} = \frac{10 \cdot 9 \cdot 8!}{2 \cdot 1 \cdot 8!} = \frac{10 \cdot 9}{2 \cdot 1} = \frac{90}{25} = 45$

compro no dia	venda no dia	
5	6, 7, 11, 12, 14	+ 5
10	11, 12, 14	+ 3
13	14	+ 1

$5 + 3 + 1 = 9$

$P = \frac{9}{45} = \boxed{\frac{1}{5}}$ (C)

(8) $n(S) = 9$

$A = \{(3,2), (2,3)\}$

$n(A) = 2$

$P(A) = \frac{n(A)}{n(S)} = \boxed{\frac{2}{9}}$ (D)

(9) HEXÁGONO = 6 VÉRTICES, escolhe 3

$C_{6,3} = \frac{6!}{3!3!} = \frac{6.5.4.\cancel{3!}}{\cancel{3!}.3.2.1} = \frac{6.5.4}{3.2.1} = \frac{120}{6} = 20$ possi

1 vértice forma 2 retângulos

$6.2 = 12$ retângulos

$P = \frac{12}{20} = \boxed{\frac{3}{5}}$ (C)