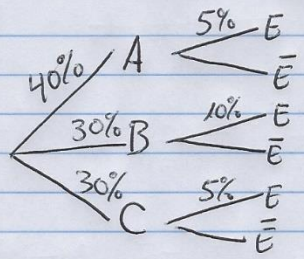
TRABALHO 2

1) E → Esquece.



1.1) $P(E) = 0{,}05 \times 0{,}4 + 0{,}1 \times 0{,}3 + 0{,}05 \times 0{,}3 = 0{,}065$

1.2) $P(B/E) = \frac{P(E/B) \times P(B)}{P(E)} = \frac{0{,}1 \times 0{,}3}{0{,}065} \approx 0{,}462$

2) 2.1) $P(B/M) = \frac{84}{230} = 0{,}365$

$84 + 146 = 230$

2.2) 80% online // 20% Bilheteira

$\frac{264}{440} = 0{,}6$ 60% Plateia // 40% Balcão

25% da bilheteira → plateia

TOTAL: 440

	Plateia	Balcão	
online	242	110	352
Bilheteira	22	66	88
	264	176	440

$0{,}8 \times 440 = 352$ (online)

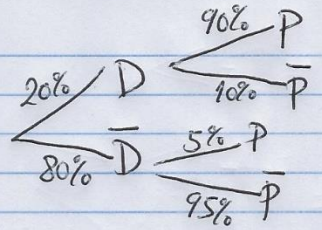
$0{,}6 \times 440 = 264$ (plateia)

$0{,}25 \times 88 = 22$

$P(\text{plateia}/\text{online}) = \frac{242}{352} = 68{,}75\%$

D – Doença P – Resultado positivo

3)



$$P(D/\bar{P}) = \frac{P(\bar{P}/D) \times P(D)}{P(\bar{P})} =$$

$$= \frac{0,1 \times 0,2}{0,1 \times 0,2 + 0,95 \times 0,8} = \frac{0,02}{0,78} = 2,56\%$$

4) $P(H) = \frac{1434}{3435} \approx 0,417$ $P(A) = \frac{1232}{3435} = 0,35860$

$$P(A \cap H) = \frac{518}{3435} \approx 0,15080$$

$0,417 \times 0,3586 = 0,1495 \neq 0,1508$ $P(H) \times P(A) \neq P(A \cap A)$

Logo: A e H NÃO SÃO independentes.

5.1) $P(A) \times P(B) = 0,6 \times 0,8 = 0,48 = P(A \cap B)$ A e B SÃO independentes

5.2) $P(A/B) = \frac{0,48}{0,8} = \frac{3}{5}$

5.3) $P(B/A) = \frac{0,48}{0,6} = \frac{4}{5}$

6.1) $p = \frac{2}{6} \times \frac{6}{10} + \frac{4}{6} \times \frac{7}{12} = \frac{53}{90}$

6.2) $P(\bar{D} \cap A) = P(\bar{D}/A) \times P(A) = \frac{6}{10} \times \frac{2}{6} = \frac{1}{5}$

6.3) $p = \frac{6}{10} = \frac{3}{5}$