

Teste do dia 23 de agosto

1) USANDO A INDUÇÃO MATEMÁTICA PROVAR QUE

$$\sum_{n=1}^m \frac{1}{2^n} = 2 - \frac{m+2}{2^m}$$

$n=1$ $\frac{1}{2} = 2 - \frac{1+2}{2}$ ✓ $n=k$ ✓

$$\sum_{n=1}^{k+1} \frac{1}{2^n} = \sum_{n=1}^k \frac{1}{2^n} + \frac{1}{2^{k+1}} = 2 - \frac{k+2}{2^k} + \frac{1}{2^{k+1}} = 2 - \frac{(k+2)2 - k - 1}{2^{k+1}} = 2 - \frac{k+3}{2^{k+1}}$$

2) USANDO A TABELA V/F PROVAR QUE

$$(A \Rightarrow B) \wedge (B \Rightarrow C) \Rightarrow (A \Rightarrow C)$$

A	B	C
V	V	V
V	V	F
V	F	V
V	F	F
F	V	V
F	V	F
F	F	V
F	F	F

$A \Rightarrow B$

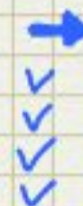
$B \Rightarrow C$

$A \Rightarrow C$

A	B	C
V	V	V
F	V	V
F	F	V
F	F	F

$(A \Rightarrow B) \wedge (B \Rightarrow C)$

V
V
V
V



$A \Rightarrow C$
V
V
V
V

3) CALCULE A PROBABILIDADE DE FORMAR COM A LETRAS DA PALAVRA

APARATO ANAGRAMAS

A1: Con x x Con x x x

ou A2: x A x x x x Vog

ou A3: x x x x Vog x x

RESPOSTA $(A1 + A2 + A3 - A12 - A13 - A23 + A123) / \frac{7!}{3!} \leftarrow AAA$

A1: (Con, Con) $A_{3,2} \frac{3!}{(3-2)!}$ PR, PT, RT
AP, TP, TR

SOBRA 5 LETRAS COM 3A $5! / 3!$

$A_1 = 5!$

A2: (A, Vog) AO: $5! / 2!$ AA: $5!$

$A_2 = \frac{3 \cdot 5!}{2}$

A3: Vog O: $6! / 3!$ A: $6! / 2!$
 $5! \quad 3 \cdot 5!$

$A_3 = 4 \cdot 5!$

A12: Con A x Con x x Vog
(Con, Con) → $3!$ AO: $3! / 2!$ AA: $3!$
 $6 \times \frac{3}{2} \times 3!$

$A_{12} = 9 \cdot 3!$

A₁₃: Cov x x Cov Vog x x

(Cov, Cov) 3!

A: $\frac{4!}{2!}$ O: $\frac{4!}{3!}$

$6 \left(3 + \frac{4}{3!} \right) 3! = 16 \cdot 3!$

A₁₃: 16 · 3!

A₂₃: * A x x Vog x Vog

AO 4!
OA 4!
AA 4!

3 · 4!

A₂₃: 12 · 3!

A₁₂₃: Cov A x Cov Vog x Vog
(Cov Cov) → 3!

AO 2!
OA 3!
AA 2!

A₁₂₃: 6 · 3!

$\left(5! + \frac{3}{2} 5! + 4 \cdot 5! - 9 \cdot 3! - 16 \cdot 3! - 12 \cdot 3! + 6 \cdot 3! \right) / 7 \cdot 6 \cdot 5 \cdot 4$

$\left(\frac{13}{2} \cdot 5! - 31 \cdot 3! \right) / 7 \cdot 6 \cdot 5 \cdot 4$

$(130 - 31) \cdot 3! / 7 \cdot 6 \cdot 5 \cdot 4 \rightarrow$

$\frac{99}{140} \approx 70.7\%$

Teste do dia 30 de agosto

PROVA A PROPRIEDADE

$A \wedge (B \vee C) \Leftrightarrow (A \wedge B) \vee (A \wedge C)$

A	B	C	A ∧ (B ∨ C)	⇔	(A ∧ B) ∨ (A ∧ C)
V	V	V	V	V	V
V	V	F	V	V	V
V	F	V	V	V	V
V	F	F	F	V	F
F	V	V	F	V	F
F	V	F	F	V	F
F	F	V	F	V	F
F	F	F	F	V	F

AUTOMATAS DA PALCOURA SASSARI COM

- 1) S x Cov Vog x x x
- 2) Cov A Cov x x x x
- 3) x Vog x A x Vog x

1) Cov = S
Vog = A 4! Vog = 1 4!/2!
Cov = R
Vog = A 4!/2! Vog = 1 2!/2! 2!

tot $\left(1 + \frac{1}{2} + \frac{1}{2} + \frac{1}{4} \right) 4! = 9 \cdot 3!$

$$2) \text{ Cov Cov} \quad \begin{array}{l} SS \quad 4! \\ RS \quad 4!/2! \\ SR \quad 4!/2! \end{array} \quad \left(1 + \frac{1}{2} + \frac{1}{2}\right) 4! = 2 \cdot 4! = 8 \cdot 3!$$

$$3) \text{ Vog Vog} \quad \begin{array}{l} A1 \quad 4!/3! \\ IA \quad 4!/3! \end{array} \quad 8$$

$$1) + 2) + 3) \quad 17 \cdot 6 + 8 = \boxed{110}$$

12) S A Cov Vog x x x

13) S Vog Cov A x Vog x

23) Cov A Cov A x Vog x

$$12) \text{ Cov} = R \quad \text{Vog: A ov I} \quad 3!/2! \quad 2 \cdot 3!/2! = 3! \quad \left. \begin{array}{l} \\ \\ \end{array} \right\} 3 \cdot 3!$$

$$\text{Cov} = S \quad \text{Vog: A ov I} \quad 3! \quad 2 \cdot 3!$$

$$13) \text{ Cov: R} \quad \text{Vog Vog} \quad \begin{array}{l} IA \quad 3!/2! \\ A1 \quad 3!/2! \end{array} \quad 1+1+2+2 = 6$$

$$\text{Cov: S} \quad \begin{array}{l} IA \quad 3! \\ A1 \quad 3! \end{array}$$

$$23) \text{ Cov Cov} \quad \begin{array}{l} RS \quad 3!/2! \\ SR \quad 3!/2! \\ SS \quad 2! \end{array} \quad 1+1+2 = 4$$

$$12) + 13) + 23) = 18 + 6 + 4 = \boxed{28}$$

123) S A Cov A x Vog x

$$\text{Vog} = I \quad \begin{array}{l} \text{Cov} = S \\ \text{Cov} = R \end{array} \quad \begin{array}{l} 3! \\ 2!/2! \end{array} \quad \boxed{3}$$

$$110 - 28 + 3 = 85$$

$$\text{Tot} \quad \frac{7!}{3!2!} = \frac{7 \cdot 6 \cdot 5 \cdot 4}{2} = 420$$

$$\frac{85}{420} = \frac{17}{84} \sim \frac{1}{5}$$