

## Teste Fevereiro 2008 11° 62

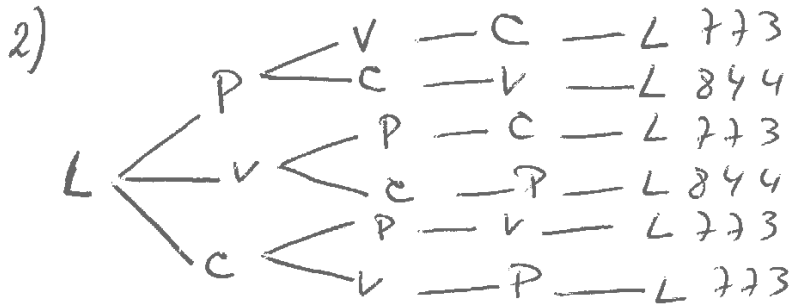
### Resolução

1.1) Trilho- tem 2 vértices com grau ímpar e os restantes têm grau par

1.2) Circuito- todos têm grau par.

Exemplo: A C E D C B D F A E F B A

Percursos mínimos



percursos mínimos com 773 Km : LPVCL, LVPCL, LCPVL, LCVPL

3.1)  $32 \cdot (1.012)^t$

3.2)  $32 \cdot (1.012)^{19} = 40.14021\dots$

4)  $P(V, V) = \frac{3}{5} \times \frac{3}{5} = \frac{9}{25}$        $P(V, A) = P(A, V) = \frac{3}{5} \times \frac{2}{5} = \frac{6}{25}$

$P(A, A) = \frac{2}{5} \times \frac{2}{5} = \frac{4}{25} = \frac{1}{10}$

$x_i$	(V,V)	(V,A)	(A,V)	(A,A)
$P_i$	9/25	6/25	6/25	4/25

5.1) 20 B    4 P    Total: 24

5.1.1)  $\frac{20}{24} \cdot \frac{19}{23} = \frac{380}{552} = 0.688$

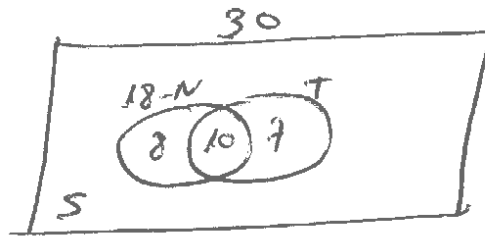
5.1.2)  $\frac{20}{24} \times \frac{19}{23} + \frac{4}{24} \times \frac{3}{23} = 0.7101$

5.2.1) 3

5.2.2) 6

5.2.3) 22

6)



Tênis:  
10 + 7 = 17

$$7.1) P(\text{sim}) = 15\% + 25\% + 12\% + 8\% = 60\% \quad P(S) = 40\% \quad P(\text{sim} / S) = \frac{15\%}{40\%} = 0.375$$

$$P(\text{Sim} \cap S) = 15\%$$

7.2)  $P(\text{Sim} \cap S) = P(\text{Sim}) * P(S)$  verificaremos:

$$P(\text{Sim} \cap S) = 15\% = 0.15 \quad P(\text{Sim}) * P(S) = 0.6 * 0.4 = 0.24$$

Como 0.15 é diferente de 0.24, então não são independentes.

$$8.1) \frac{40}{100} = 0.4$$

$$8.2) P(W) = \frac{60}{100} = 0.6$$

$$P(W / P) = \frac{40}{70} = 0.57$$

a probabilidade diminuiu, pois  $0.57 < 0.6$

$$9.1) P(Az) = P(Az / CxA) * P(CxA) + P(Az / CxB) * P(CxB) = \\ = \frac{3}{10} * \frac{1}{3} + \frac{6}{10} * \frac{2}{3} = \frac{1}{10} + \frac{4}{10} = \frac{5}{10} = \frac{1}{2}$$

$$9.2) P(L) = P(L / CxA) * P(CxA) + P(L / CxB) * P(CxB) = \\ = \frac{1}{10} * \frac{1}{3} + \frac{2}{10} * \frac{2}{3} = \frac{1}{30} + \frac{4}{30} = \frac{5}{30} = \frac{1}{6}$$

$$P(CxA / L) = \frac{P(L / CxA) * P(CxA)}{P(L)} = \frac{\frac{1}{10} * \frac{1}{3}}{\frac{1}{6}} = \frac{\frac{1}{30}}{\frac{1}{6}} = \frac{1}{30} * \frac{6}{1} = \frac{1}{5} = 0.2$$