

## Probabilidade 2

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$$1) \quad S = 3 \text{ lâmpadas} \quad 3/5$$

$$A = 2 \quad " \quad 2/5$$

$$A \cup S = A + S - A \cap S$$

$$\frac{2}{5} + \frac{3}{5} - \frac{2}{5}$$

$$A \cup S = 3/5$$

(B)

$$2) \quad S = 36$$

$$A(3) \{1, 2\} \quad \{2, 1\} \quad - 2$$

$$B(6) \{1, 5\} \quad \{5, 1\} \quad \{2, 4\} \quad \{4, 2\} \quad \{3, 3\} \quad 5$$

$$A \cup B = 2/36 + 5/36 - 0$$

$$A \cup B = 7/36$$

(C)

$$3) \quad P(A) \geq 110 \text{ mi}$$

$$P(B) \leq 110 \text{ mi}$$

$$P(A \cap B) \leq 110 \text{ mi}$$

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

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

$$P(A \cap B) = 1,03 - 1$$

$$P(A \cap B) = 0,03$$

(3%)

4)

10! = 109

1 final 0

-

$$9 \times 10 \times 9 = 90 + 1 = 91$$

2 final par x 5

$$9 \times 10 \times 5 = 450$$

171

$$A = 121/1000$$

900 números

2 n final 0

$$(91/900)(91/900) = 1\%$$

1 n " "

$$2(91/1000)(809/900) = 18\%$$

1 n par e outro final 5

$$2 \cdot 4(90/900)(90/900) = 8\%$$

total = 27%

73% não termina com 0

5)

$$a = 7$$

$$r = 1$$

a, b, c, d

$$a = 7!$$

$$P = \frac{7! \cdot 4!}{10!}$$

$$P = 1/30$$

C



$$\begin{array}{lcl}
 6) & \begin{array}{l} A=1 \\ B=3 \\ C=3 \\ D=1 \end{array} & \left. \begin{array}{l} \\ \\ \\ \end{array} \right\} \begin{array}{l} \text{possibilidades} \\ \\ \\ \end{array} \\
 & & \begin{array}{l} 1/8 \\ 3/8 \\ 3/8 \\ 1/8 \end{array}
 \end{array}$$

$$\text{total} = 8$$

$$A.A \quad 2/8 \cdot 2/8 = 4/64$$

$$B.B \quad 3/8 \cdot 3/8 = 9/64$$

$$C.C \quad 3/8 \cdot 3/8 = 9/64$$

$$D.D \quad 1/8 \cdot 1/8 = 1/64$$

$$\text{total } 20/64 = 5/16$$

(D)

$$7) \quad C102$$

$$\frac{10!}{2! \cdot 8!} = \frac{10 \cdot 9}{2} = 45$$

$$\text{dia 5} \quad \{5, 6, 7, 11, 12, 14\} \quad 5$$

$$\text{dia 10} \quad \{11, 12, 14\} \quad 3$$

$$\text{dia 13} \quad \{14\} \quad 1$$

$$9$$

$$9/45 = 1/5$$

(C)

8)

9 números

se a 2 e 3

1ª rodada 2 possibilidades = A

2ª 1 = B

$$A \cup B = 2/9 + 1/9 - 1/9 = \frac{2}{9} \quad \text{(D)}$$

9)

C63

$$\frac{6!}{3! \cdot 3!}$$

$$\frac{6 \cdot 5 \cdot 4}{3 \cdot 2 \cdot 1} = 20$$

cada vértice forma 2 triângulos retângulos  
6 vértices  $\rightarrow 12$

$$12/20 = 3/5$$

(C)