Aluno: **Leonardo Yukio Aoki** Turma: **CTII 348**
Prontuário: **CB1990233** *IFSP - Câmpus Cubatão*

Tarefa Básico 16
Probabilidade I

1. $S = \{1, 2, 3, 4, 5, \ldots, 18, 19, 20\}$

Produto ímpar ambos os fatores ímpares

$E = \{1, 3, 5, 7, 9, 11, 13, 15, 17, 19\}$

$n(E) = 10$

$C_{10,2} = \frac{10!}{2!.8!} = \frac{10.9.8!}{2.1.8!} = \boxed{45}$

$C_{20,2} = \frac{20!}{2!.18!} = \frac{20.19.18!}{2.1.18!} = \boxed{190}$

$P(E) = \frac{45}{190} = \boxed{\frac{9}{38}}$ (A)

2. $S = \{1, 2, 3, 4, 5, 6\} \Rightarrow n(S) = 6$ (D)

$E = \{2, 4, 6\} \Rightarrow n(E) = 3$ $\quad P(E) = \frac{n(E)}{n(S)} = \frac{3}{6} = \boxed{\frac{1}{2}}$

3. fumante: 17 % = 0,17

↳ mulher: 44 % = 0,44

$0,17 \cdot 0,44 = 0,075$ (B)

4. (2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37)

$$S = C_{12,2} = \frac{12!}{2!\,10!} = \frac{12 \cdot 11 \cdot 10!}{2 \cdot 1 \cdot 10!} = 66$$

Pares impares consecutivos:

(3, 5); (5, 7); (11, 13); (17, 19); (29, 31) $\Rightarrow n(E) = 5$

$$P(E) = \frac{n(E)}{n(S)} = \boxed{\frac{5}{66}}$$

B

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5. $S = \{1, 2, 3 \ldots 97, 98, 99\} \Rightarrow n(S) = 99$

$E = \{3, 6, 9 \ldots 93, 96, 99\} \Rightarrow n(E) = 33$

$$P(E) = \frac{n(E)}{n(S)} = \frac{33}{99} = \boxed{\frac{1}{3}}$$

B

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6. $n(S) = 6 \cdot 6 = \boxed{36}$

(1, 6); (6, 1); (2, 5); (5, 2); (3, 4); (4, 3)

$\underline{n(E) = 6}$

$$P(E) = \frac{6}{36} = \boxed{\frac{1}{6}}$$

C