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Tarefa Básica - Probabilidade II

1. $\frac{3}{5} \cdot \frac{2}{4} \cdot \frac{2}{3} \cdot \frac{3!}{2!} = \frac{3 \cdot 2 \cdot 1}{5 \cdot 2 \cdot 1} = \boxed{\frac{3}{5}}$ (B)

2. $A = \{(1,2);(2,1)\}$ $n(A) = 2$

$B = \{(1,5);(5,1);(2,4);(4,2);(3,3)\}$ $n(B) = 5$

$\frac{2}{36} + \frac{5}{36} = \boxed{\frac{7}{36}}$ (C)

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

$100 = 95 + 8 - x$

$x = 103 - 100$

$\boxed{x = 3\%}$

4. final zero → 91 números final ≠ zero → 809 números

final = 0 e final = 0 → $91/900 \cdot 91/900 = 0,01 = 1\%$

final ≠ 0 e final = 0 → $809/900 \cdot 91/900 = 0,09 = 9\%$

final = 0 e final ≠ 0 → $809/900 \cdot 91/900 = 0,09 = 9\%$

par e final = 5 → $90/900 \cdot 90/900 \cdot 4 = 0,04 = 4\%$

final = 5 e par → 4%

$100\% - (1\% + 9\% + 9\% + 4\% + 4\%) = \boxed{73\%}$

5. $\frac{4!7!}{10!} = \boxed{\frac{1}{30}}$ (C)

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6. AAA = 1/2 · 1/2 · 1/2 = 1/8
AAB = 1/2 · 1/2 · 1/2 · 3 = 3/8
ABB = 3 · 1/2 · 1/2 · 1/2 = 3/8
BBB = 1/2 · 1/2 · 1/2 = 1/8

$$P = \frac{1}{8}\cdot\frac{1}{8} + \frac{3}{8}\cdot\frac{3}{8} + \frac{3}{8}\cdot\frac{3}{8} + \frac{1}{8}\cdot\frac{1}{8} = \frac{20}{64} = \boxed{\frac{5}{16}}$$ (D)

7. casos possíveis: $C_{10,2} = \frac{10!}{2!\,8!} = \frac{10^{5}\cdot 9}{2\cdot 1} = 45$

Casos favoráveis:

compra	renda	
5	6, 7, 11, 12, 14	5
10	11, 12, 14	3
13	14	+ 1
		9

$$P = \frac{9}{45}$$

$$\boxed{P = \frac{1}{5}}$$ (C)

8. S = {1, 2, 3, 1, 2, 3, 1, 2, 3} n(S) = 9
A = {(2, 3); (3, 2)} n(A) = 2

$$P = \frac{n(A)}{n(S)} = \boxed{\frac{2}{9}}$$ (D)

9. $C_{6,3} = \frac{6!}{3!\,3!} = \frac{6^{2}\cdot 5\cdot 4^{2}}{3\cdot 2\cdot 1} = 20$ possíveis

→ 6 · 2 = 12 triângulos

$$P = \frac{12}{20} = \boxed{\frac{3}{5}}$$ (C)