1. (a) $\Omega = \{(C_a, C_a), (C_a, C_o), (C_o, C_a), (C_o, C_o)\}$ **ou** $\{(a_1, a_2) : a_1, a_2 \in \{C_a, C_o\}\}$ **ou** $\{C_a, C_o\} \times \{C_a, C_o\}$;
   (b) $\Omega = \{(a_1, a_2) : a_1 \in \{C_a, C_o\}, a_2 \in \{1, 2, 3, 4, 5, 6\}\}$ **ou** $\{C_a, C_o\} \times \{1, 2, 3, 4, 5, 6\}$;
   (c) $\Omega = \{(a_1, a_2, a_3) : a_1, a_2, a_3 \in \{1, 2, 3, 4, 5, 6\}\}$ **ou** $\{1, 2, 3, 4, 5, 6\}^3$

2. a) $\Omega = \{1, 2, 3, 4, 5, 6\}$ e $P(\{i\}) = \frac{2^{i-1}}{63}$, $i \in \{1, \ldots, 6\}$;
   b) Não;
   c) $A = \{2, 4, 6\}, P(A) = \frac{42}{63};$ $B = \{3, 6\}, P(B) = \frac{36}{63};$ $\overline{B} = \{1, 2, 4, 5\}, P(\overline{B}) = \frac{27}{63};$
   $C = \{1, 3, 5\}, P(C) = \frac{21}{63};$ $A \cap B = \{6\}, P(A \cap B) = \frac{32}{63};$
   $A \cup B = \{2, 3, 4, 6\}, P(A \cup B) = \frac{46}{63};$ $A \backslash B = \{2, 4\}, P(A \backslash B) = \frac{10}{63}$

3. a) $\emptyset$; $\emptyset$; Ω; Ω;
   b) $D = A \cap B$; $E = B \cap C$; $F = A \cup B \cup C$; $G = \overline{F} = \overline{A} \cap \overline{B} \cap \overline{C}$;
   $H = (A \cap \overline{B} \cap \overline{C}) \cup (\overline{A} \cap B \cap \overline{C}) \cup (\overline{A} \cap \overline{B} \cap C)$

4. (a) 0.32;   (b) 0.68;   (c) 0.12;   (d) 0.24

5. (a) 0.485;   (b) 0.515;   (c) 0.025;   (d) 0.035;   (e) 0.295

6. (a) 0.2;   (b) 0.575;   (c) 0.044

7. (a) 0.72;   (b) $\frac{0.1}{0.28}$;   (c) Não

8. Sim; Sim; Não; Não

9. (a) Não;   (b) Falsa

10. (a) 0.1; 0.6; 0.3; 0.36; 0.42;   (b) $\frac{0.52}{0.64}$

─────────────────────────────── Exercícios Suplementares à Folha 1 ─────────

1. (a) $\frac{260}{630}$;   (b) $\frac{120}{630}$;   (c) $\frac{470}{630}$;   (d) $\frac{160}{630}$;   (e) $\frac{380}{630}$

2. $P(A \Delta B) = P(A) + P(B) - 2P(A \cap B)$

3. (a) 0.32;   (b) 0.68;   (c) 0.03;   (d) 0.03

4. (a) $\frac{30}{36}$;   (b) $\frac{6}{30}$;   (c) $\frac{24}{30}$;   (d) $\frac{3}{6}$;   (e) Não

5. $\frac{2 \times \binom{13}{5}}{\binom{26}{5}} = \frac{9}{230}$

6. (a) 0.47; 0.55; 0.85; 0.83;   (b) 0.691;   (c) 0.309;   (d) 0.333;   (e) 0.717

7. (a) $\Omega = \{C_a, C_o\}^{n-1}$;
   (b) i. $P(E_j) = \frac{1}{2}, j \in \{1, \ldots, n\}$;   ii. 0 e não são independentes

8. $n > 6.644$ pelo que $n = 7$.

9. Se $n = 2$ não são independentes; se $n = 3$ são independentes.

10. (a) ——   (b) 0.719; $\frac{0.665}{0.719}$; $\frac{0.246}{0.281}$