1)

Final do documento!

2)

a) S = ABC + AC' + (AB)'

S = A(BC + C' + B')

S = A(BC + (C' + B'))

S = A(BC + ((C' + B')')')

S = A(BC + (C + B)'

S = A(BC + (CB)')

S = A(BC + (BC)')

S = A(1)

S = A

b) S = (ABC')(A'+ B'+ C')

S = (ABC'.A') + (ABC'.B') + (ABC'.C')

S = ABC'

3)

1) 𝐴.𝐵.𝐶 + 𝐴.𝐵'.𝐶 + 𝐴.𝐵'

2) 𝐴’.𝐶 ’ + 𝐴’.𝐵.𝐶 + 𝐴’.B

c) Final do documento!

d.1) ABC + AB’C + AB’C’

d.2) A’BC + A’BC’ + A’B’C’

e.1) ABC + AB’C + AB’C’

A (BC + B’C + B’C’)

A (C (B + B’) + B’C’)

A (C (1) + B’C’)

A (C + B’C’)

A ((C’ (B+C))’)

A ((C’B + C’C)’)

A ((C’B)’)

A (C+B’)

e.2) A’BC + A’BC’ + A’B’C’

A’ (BC + BC’ + B’C’)

A’ (B (C+C’) + B’C’)

A’ (B (1) + B’C’)

A’ (B + B’C’)

A’ ((B’(B+C))’)

A’ ((B’B + B’C)’)

A’ ((B’C)”)

A’ (B+C’)

f.1)

Imagem em preto e branco

Descrição gerada automaticamente com confiança média

f.2)

Imagem em preto e branco

Descrição gerada automaticamente com confiança média

4)

a) A'B'C' + A'BC' + AB'C' + AB'C

b) A'B'C' + A'BC' + AB'C' + AB'C

A'C'(B'+B) + AB'(C'+C)

A'C'(1) + AB'(1)

A'C' + AB'

5)

a) Final do documento!

b) A'BC + A'BC' + A'B'C'

c) A'BC + A'BC' + A'B'C'

A'(BC + BC' + B'C')

A'(B(C + C') + B'C')

A'(B(1) + B'C')

A'(B + B'C')

A'((B'(B+C))')

A'((B'B + B'C)')

A'((B'C)')

A'(B + C')

Uma imagem contendo fio, pendurado, atletismo, água

Descrição gerada automaticamented)

e) Final do documento!

Tabelas verdade

1. a)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | NOT(A) | NOT(B) | A OR B | NOT(A) OR NOT(B) | (A OR B) AND (NOT(A) OR NOT(B)) | **NOT((A OR B) AND (NOT(A) OR NOT(B)))** |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 | **1** |
| 1 | 0 | 0 | 1 | 1 | 1 | 1 | **0** |
| 0 | 1 | 1 | 0 | 1 | 1 | 1 | **0** |
| 0 | 0 | 1 | 1 | 0 | 1 | 0 | **1** |

1. b)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| A | B | A AND B | A OR B | NOT (A OR B) | **(A AND B) OR NOT(A OR B)** |
| 1 | 1 | 1 | 1 | 0 | **1** |
| 1 | 0 | 0 | 1 | 0 | **0** |
| 0 | 1 | 0 | 1 | 0 | **0** |
| 0 | 0 | 0 | 0 | 1 | **1** |

1. c)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | B AND C | B OR C | NOT (B OR C) | A OR C | NOT(B OR C) AND (A OR C) | **(A) OR (B AND C) OR (NOT(B OR C) AND (A OR C))** |
| 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | **1** |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | **1** |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | **1** |
| 1 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | **1** |
| 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | **1** |
| 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | **0** |
| 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | **0** |
| 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | **0** |

1. d)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | D | (A AND B) | (C AND D) | (A AND B) OR (C AND D) | NOT(A) | (B AND D) | (C AND NOT(A)) | ((C AND NOT(A)) OR (B AND D)) | NOT((C AND NOT(A)) OR (B AND D)) | **((A AND B) OR (C AND D)) AND NOT((C AND NOT(A)) OR (B AND D))** |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | **0** |
| 1 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | **1** |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | **0** |
| 1 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | **1** |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | **1** |
| 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **0** |
| 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **0** |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | **0** |
| 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 0 | **0** |
| 0 | 1 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | **0** |
| 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 1 | 0 | **0** |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | **0** |
| 0 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 0 | **0** |
| 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | **0** |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | **0** |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | **0** |

3. c1)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | NOT(B) | (A) AND (B) AND (C) | (A) AND (NOT(B)) AND (C) | (A) AND NOT(B) | **((A) AND (B) AND (C)) OR ((A) AND NOT (B) AND (C)) OR ((A) AND NOT (B)))** | *A AND (C OR NOT(B))* |
| 1 | 1 | 1 | 0 | 1 | 0 | 0 | **1** | *1* |
| 1 | 1 | 0 | 0 | 0 | 0 | 0 | **0** | *0* |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 | **1** | *1* |
| 1 | 0 | 0 | 1 | 0 | 0 | 1 | **1** | *1* |
| 0 | 1 | 1 | 0 | 0 | 0 | 0 | **0** | *0* |
| 0 | 1 | 0 | 0 | 0 | 0 | 0 | **0** | *0* |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | **0** | *0* |
| 0 | 0 | 0 | 1 | 0 | 0 | 0 | **0** | *0* |

3.c2)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | NOT(A) | NOT(C) | NOT(A) AND NOT(C) | NOT(A) AND (B) AND (C) | NOT(A) AND (B) | **(NOT(A) AND NOT(C)) OR (NOT(A) AND (B) AND (C)) OR (NOT (A) AND (B))** | *NOT (A) AND (B OR NOT(C))* |
| 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | **0** | *0* |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | **0** | *0* |
| 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | **0** | *0* |
| 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | **0** | *0* |
| 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | **1** | *1* |
| 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | **1** | *1* |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | **0** | *0* |
| 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | **1** | *1* |

5.a)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | NOT(A) | NOT(C) | NOT(A) AND NOT(C) | NOT(A) AND (B) AND (C) | NOT(A) AND (B) | **(NOT(A) AND NOT(C)) OR (NOT(A) AND (B) AND (C)) OR (NOT(A) AND (B))** | *NOT(A) AND (B OR NOT(C))* |
| 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | **0** | *0* |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | **0** | *0* |
| 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | **0** | *0* |
| 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | **0** | *0* |
| 0 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | **1** | *1* |
| 0 | 1 | 0 | 1 | 1 | 1 | 0 | 1 | **1** | *1* |
| 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | **0** | *0* |
| 0 | 0 | 0 | 1 | 1 | 1 | 0 | 0 | **1** | *1* |

Caso esteja ruim de ler as tabelas, segue o link original:

<https://docs.google.com/spreadsheets/d/1N5YEoPZT2SKmo-0LYIUj5B8s-AmI08ck_5lZ-7MzDVA/edit?usp=sharing>