|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| A | B | C | D | E | F | G |
| 1 | 1 | 1 | 1 | 1 | 1 | 0 |
| 0 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 0 | 0 | 1 |
| 0 | 1 | 1 | 0 | 0 | 1 | 1 |
| 1 | 0 | 1 | 1 | 0 | 1 | 1 |
| 1 | 0 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 0 | 1 | 1 |
| X | X | X | X | X | X | X |
| X | X | X | X | X | X | X |
| X | X | X | X | X | X | X |
| X | X | X | X | X | X | X |
| X | X | X | X | X | X | X |
| X | X | X | X | X | X | X |

A)

C | C

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 0 | 1 | 1 |
| 0 | 1 | 1 | 1 |
| X | X | X | X |
| 1 | 1 | X | X |

B A

B

B A

D | D | D |

C + BD + BD + A

C + B+D + A

B)

C | C

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 1 | 1 | 1 |
| 1 | 0 | 1 | 0 |
| X | X | X | X |
| 1 | 1 | X | X |

B A

B

B A

D | D | D |

CD + CD + A + AB

C+D + A + AB

C)

C | C

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 0 | 1 | 1 |
| 1 | 1 | 1 | 1 |
| X | X | X | X |
| 1 | 1 | X | X |

B A

B

B A

D | D | D |

A + C + D

D)

C | C

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 0 | 0 | 1 |
| 0 | 1 | 0 | 1 |
| X | X | X | X |
| 1 | 1 | X | X |

B A

B

B A

D | D | D |

A + BCD + BD + BC

A + BCD + B \* (C+D)

E)

C | C

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 0 | 0 | 1 |
| 0 | 0 | 0 | 1 |
| X | X | X | X |
| 1 | 0 | X | X |

B A

B

B A

D | D | D |