**Funkcja a)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ab/cd** | **00** | **01** | **11** | **10** |
| **00** | **0** | **0** | **0** | **0** |
| **01** | **1** | **1** | **0** | **0** |
| **11** | **1** | **1** | **0** | **0** |
| **10** | **0** | **1** | **1** | **0** |

**Układ z hazardem**

f(abcd) =

Po przekształceniu z praw de Morgana

f(abcd) =

**Eliminacja hazardu z układu**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ab/cd** | **00** | **01** | **11** | **10** |
| **00** | **0** | **0** | **0** | **0** |
| **01** | **1** | **1** | **0** | **0** |
| **11** | **1** | **1** | **0** | **0** |
| **10** | **0** | **1** | **1** | **0** |

f(abcd) =

Po przekształceniu z praw de Morgana

f(abcd) =

**Funkcja b)**

**Układ z hazardem**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ab/cd** | **00** | **01** | **11** | **10** |
| **00** | **0** | **0** | **0** | **0** |
| **01** | **0** | **1** | **1** | **0** |
| **11** | **0** | **0** | **1** | **1** |
| **10** | **0** | **0** | **1** | **1** |

f(abcd) = ac +

Po przekształceniu z praw de Morgana

f(abcd) =

**Eliminacja hazardu z układu**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **ab/cd** | **00** | **01** | **11** | **10** |
| **00** | **0** | **0** | **0** | **0** |
| **01** | **0** | **1** | **1** | **0** |
| **11** | **0** | **0** | **1** | **1** |
| **10** | **0** | **0** | **1** | **1** |

f(abcd) = ac + bcd

Po przekształceniu z praw de Morgana

f(abcd) =

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| a | b | c | d | F(a,b,c,d) |
| 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 1 | 0 |
| 0 | 0 | 1 | 0 | 0 |
| 0 | 0 | 1 | 1 | 0 |
| 0 | 1 | 0 | 0 | 0 |
| 0 | 1 | 0 | 1 | 1 |
| 0 | 1 | 1 | 0 | 0 |
| 0 | 1 | 1 | 1 | 1 |
| 1 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 1 |
| 1 | 0 | 1 | 1 | 1 |
| 1 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 | 1 |