The evaluation of y (x + y)

Answer: (y’(x + y))’ change compliment operator

(y’x + y’y)’ Distributive

(y’x + 0)’ Compliment

(y’x)’0’ DeMorgan’s

(y’x)’1 Compliment

(y’x)’ Identity

(y’’ + x’) Double Compliment

y + x’

A circuit for the Boolean expression z + (x + y)

Answer:

x

y

z

The Karnaugh map and equivalent Boolean expression for the following Boolean function:

|  |  |  |  |
| --- | --- | --- | --- |
| x | y | z | f (x, y, z) |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 1 |
| 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 |
| 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 0 |

Answer:

yz

Boolean expression: x’y’z + yz’ + xz’

00 01 11 10

x

|  |  |  |  |
| --- | --- | --- | --- |
|  | 1 |  | 1 |
| 1 |  |  | 1 |

0

1