|  |  |  |  |
| --- | --- | --- | --- |
| X | Y | Z | OUTPUT |
| 0 | 0 | 0 | 1 |
| 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 0 |
| 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 0 |

OUTPUT = 000 100 101 (minterms)

OUTPUT = X’Y’Z’ + XY’Z’ + XY’Z

Uniting Theorem: XY + XY’ = X

OUTPUT = X’Y’Z’ + XY’Z’ + XY’Z

OUTPUT = X’Y’Z’ + XY’Z’ + XY’Z’ + XY’Z

IDEMPOTENCY: X + X = X

OUTPUT = X’Y’Z’ + XY’Z’ + XY’

UNITING

OUTPUT = Y’Z’ + XY’

UNITING

