

9.

$$F(x, y, z) = xy + xz + yz$$

Expresar en forma normal disyuntiva y hacerlo por 2 métodos.

1) Tabla de la verdad \rightarrow Extraer minterms \rightarrow
Expresar F.n.d.

x	y	z	xy	xz	yz	F
0	0	0	0	0	0	0
0	0	1	0	0	0	0
0	1	0	0	0	0	0
0	1	1	0	0	0	0
1	0	0	0	0	1	1 $\rightarrow \bar{x}y\bar{z}$
1	0	1	0	1	0	0
1	1	0	1	0	0	1 $\rightarrow x\bar{y}z$
1	1	1	1	1	1	1 $\rightarrow xy\bar{z}$
						1 $\rightarrow xyz$

$$F = \bar{x}y\bar{z} + x\bar{y}z + xy\bar{z} + xyz$$

2) Usar leyes

$$F(x, y, z) = xy + xz + yz$$

$$= \overline{\overline{xy + xz}} + yz$$

$$= \overline{\overline{xy} \cdot \overline{xz}} + yz$$

$$= \overline{(\overline{x+y})(\overline{x+z})} + yz$$

$$= \overline{(\overline{x+y})\overline{x} + (\overline{x+y})\overline{z}} + yz$$

$$= \overline{\overline{x}\overline{x} + \overline{x}\overline{y} + \overline{x}\overline{z} + \overline{y}\overline{z}} + yz$$

$$= \overline{\overline{x} + \overline{x}\overline{y} + \overline{x}\overline{z} + \overline{y}\overline{z}} + yz$$

$$= \overline{\overline{x} + \overline{x}(\overline{y}\overline{z}) + \overline{y}\overline{z}} + yz$$

$$= \overline{\overline{x} + \overline{y}\overline{z}} + \overline{yz}$$

$$= \overline{x} + \overline{y}\overline{z} + \overline{yz}$$

$$= \overline{x}(\overline{y} + y)(\overline{z} + z) + \overline{y}\overline{z}(\overline{x} + x) + y\overline{z}$$

$$= \overline{x}\overline{y}\overline{z} + \overline{x}y\overline{z} + \overline{x}\overline{y}z + \overline{x}y z + \overline{y}\overline{z}$$

$$= \overline{x}\overline{y}\overline{z} + \overline{x}y\overline{z} + \overline{x}\overline{y}z + \overline{x}y z + \overline{x} + \overline{y}$$

xyz

Fallenas