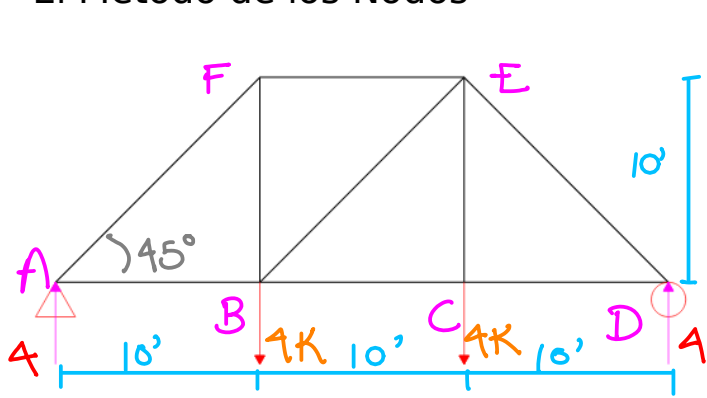


El Método de los Nodos



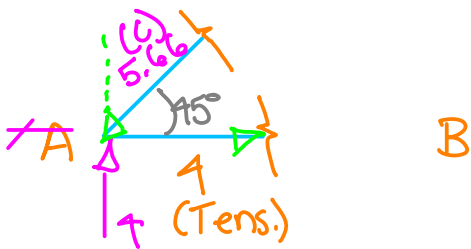
$$\sum M_A = 4(10) + 4(20) - D_y(30) = 0$$

$$D_y = 4 \text{ Kips } \uparrow$$

$$\sum F_y = -4 - 4 + 4 + A_y = 0$$

$$A_y = 4 \text{ Kips } \uparrow$$

Nodo A F



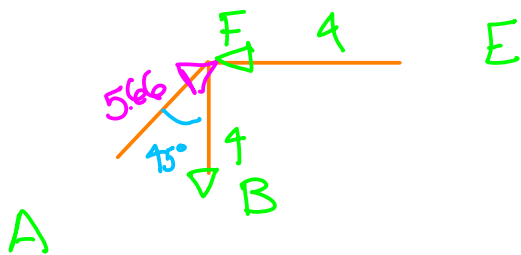
$$\sum F_y = 4 - F_{AF} \sin 45^\circ = 0$$

$$F_{AF} = 5.66 \text{ Kips Compression}$$

$$\sum F_x = -5.66 \cos 45^\circ + F_{AB} = 0$$

$$F_{AB} = 4 \text{ Kips Tension}$$

Nodo F



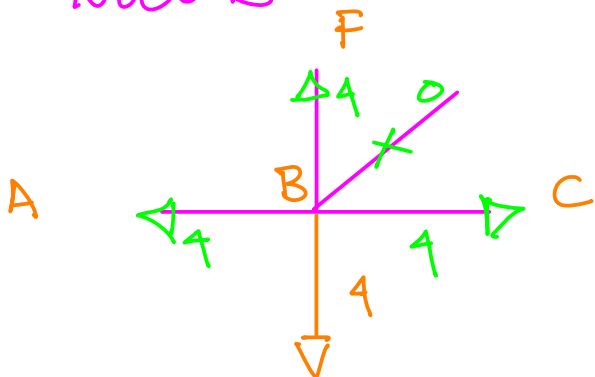
$$\sum F_x = 5.66 \sin 45^\circ - F_{FE} = 0$$

$$F_{FE} = 4 \text{ kips Compression}$$

$$\sum F_y = 5.66 \cos 45^\circ - F_{FB} = 0$$

$$F_{FB} = 4 \text{ Kips Tension}$$

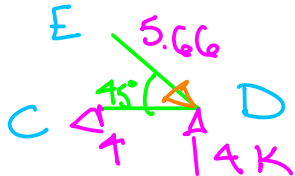
Nodo B



$$\sum F_x = -4 + F_{BC} = 0$$

$$F_{BC} = 4 \text{ Kips (Tension)}$$

Nodo D

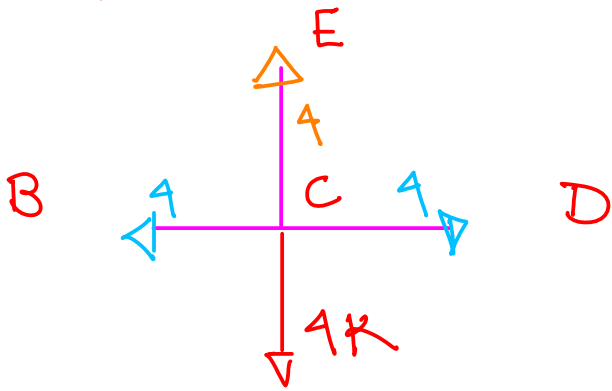


$$\sum F_y = 4 \text{ k} - F_{ED} \sin 45^\circ = 0$$

$$F_{ED} = 5.66 \text{ Kip. Compression}$$

$$\sum F_x = 5.66 \cos 45^\circ - F_{CD} = 0 \rightarrow F_{CD} = 4 \text{ k (T)}$$

Node C

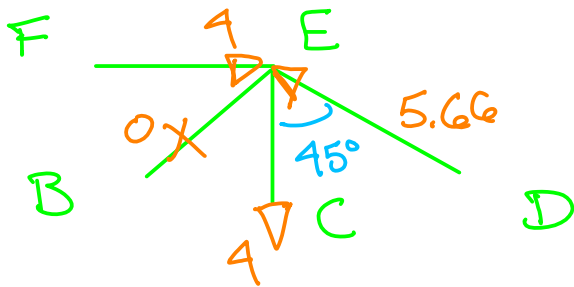


$$\sum F_x = -4 + 4 = 0$$

$$\sum F_y = -4 + F_{EC} = 0$$

$$F_{EC} = 4 \text{ kN (Tension)}$$

Node E



$$\sum F_x = 4 - 5.66 \sin 45^\circ = 0 \checkmark$$

$$\sum F_y = -4 + 5.66 \cos 45^\circ = 0 \checkmark$$
