

### P3

Determine the force in each member of the truss. Note the presence of any zero-force members. Units: Kips, ft.

$$\sum M_A = 0 = D_x(4) - 1(8)$$

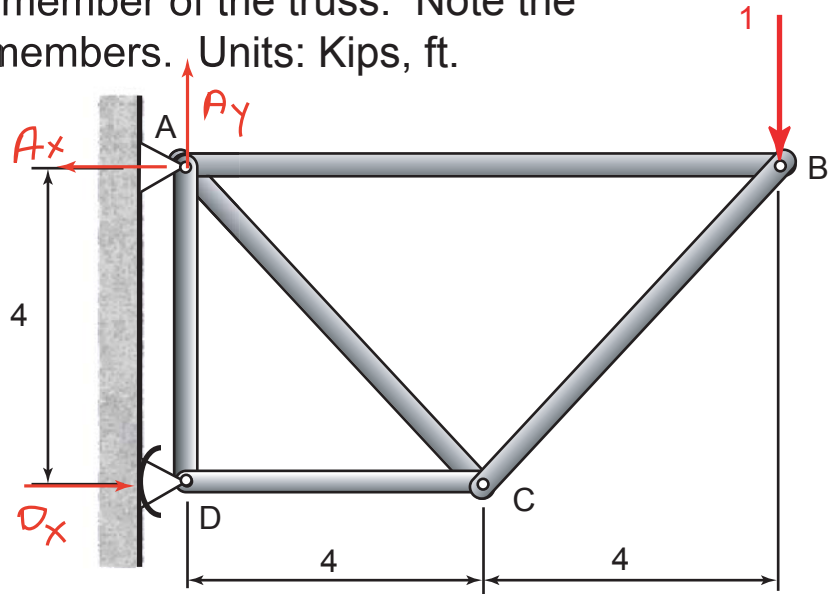
$$D_x = 2.00 \text{ k} \rightarrow$$

$$\sum F_x = 0 = D_x - A_x$$

$$A_x = 2.00 \text{ k} \leftarrow$$

$$\sum F_y = 0 = A_y - 1$$

$$A_y = 1.00 \text{ k} \uparrow$$



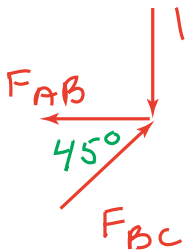
JOINT D

$$F_{DC} = D_x = 2.00 \text{ k (C)}$$

$$F_{AD} = 0$$

} TRICK #1

JOINT B



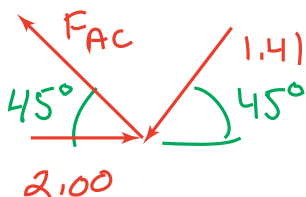
$$\sum F_y = 0 = -1 + F_{BC} \sin(45)$$

$$F_{BC} = 1.41 \text{ k (C)}$$

$$\sum F_x = 0 = -F_{AB} + F_{BC} \cos(45)$$

$$F_{AB} = 1.00 \text{ k (T)}$$

JOINT C



$$\sum F_y = 0 = F_{AC} \sin(45) - 1.41 \sin(45)$$

$$F_{AC} = 1.41 \text{ k (T)}$$