Use the "intuitive" method of joints to calculate the force in each member of the truss shown.

Draw FBD of total truss

\[ M_A = 0 \]
\[ E_x = 400 \text{ lb} \rightarrow \text{as shown} \]
\[ + \Rightarrow \sum F_x = 0 \quad \Rightarrow \quad 400 \]
\[ A_x + F_x = 0 \]

(3)

(4) \[ A_x = 400 \text{ lb} \quad \text{as shown} \]

\[ + \Rightarrow \sum F_y = 0 \]
\[ A_y - 200 = 0 \]

(5) \[ A_y = 200 \text{ lb} \quad \text{as shown} \]

(6) 

Start with joint A because it only has 2 unknowns.

(7) \[ \sum F_x = 0 \quad \Rightarrow -400 + F_{AB} = 0 \quad F_{AB} = 400 \text{ lb T} \]

(8) \[ \sum F_y = 0 \quad \Rightarrow 200 - F_{AE} = 0 \quad F_{AE} = 200 \text{ lb T} \]

(9) 

Move to joint E because it now only has 2 unknowns.

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(17) \[ F_{AE} + 0.707 F_{EB} = \frac{1}{4} \text{lb} \]

(18) \[ F_{EB} = 282.9 \text{lb} \text{ or } \frac{282.9}{lb} C \]

(19) \[ 400 + F_{ED} + 0.707 F_{EB} = 0 \]

(20) \[ F_{ED} = 200 \text{ lb} \text{ or } \frac{200}{lb} C \]

Move to joint D because it now has only 2 unknowns.

(21) \[ F_{DB} \]

(22) \[ \Rightarrow \sum F_y = 0 \]

\[ F_{DB} = 0 \text{ or } \frac{0}{lb} \]

\[ F_{DC} = 200 \text{ lb} \text{ or } \frac{200}{lb} C \]
Move to joint C to calculate the last unknown

\[ \frac{F_{CB}}{707 F_{CB}} + \frac{1}{2} F_y = 0 \]

\[ 0.707 F_{CB} = 200 = 0 \]

\[ F_{CB} = 282.9 \text{ lb} \]

Check

\[ + \quad \leq F_x = 0 + 200 = 200 \]

\[ - F_{DC} - 0.707 F_{CB} = 0 \]

\[ 0 = 0 \quad OK \]

Move to joint B to finish check

\[ F_{AB} \]

\[ + \quad \leq F_y = 0 + 282.9 = 0 \]

\[ - 0.707 F_{EB} - F_{DB} - 0.707 F_{CB} = 0 \]

\[ 0 = 0 \quad OK \]
\[ F_x = 0 \Rightarrow -F_{AB} - 1.707F_{EB} + 1.707F_{EB} = 0 \]

\[ 0 = 0 \]

\[ \text{Summary} \]

\[ 400 \text{ lb} \]

\[ 200 \text{ lb} \]

\[ 200 \text{ lb} \]

\[ 200 \text{ lb} \]

\[ 200 \text{ lb} \]

\[ 200 \text{ lb} \]

\[ 200 \text{ lb} \]