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# Analysis of Structures (Frames)

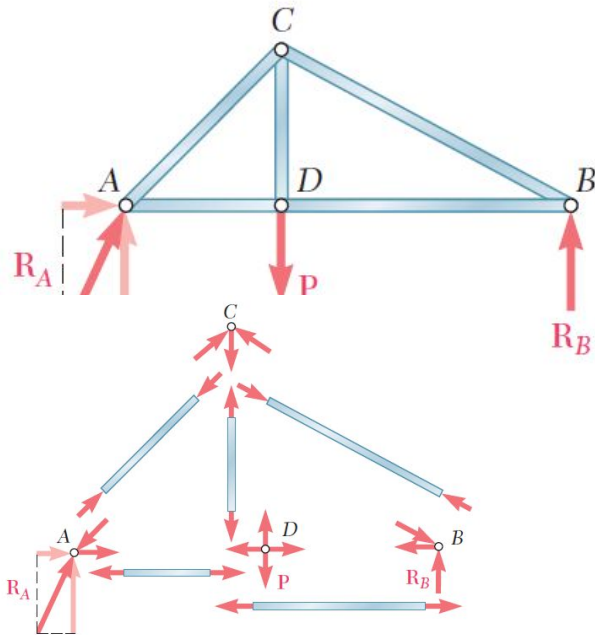
— Vector Mechanics-Chapter 6 —

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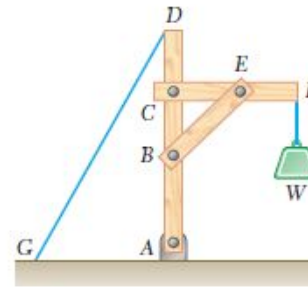
# Part - 3: Frames

## Truss and Frames

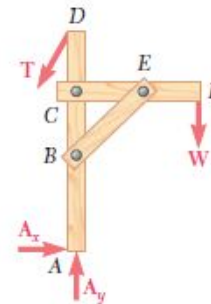
### Two force members



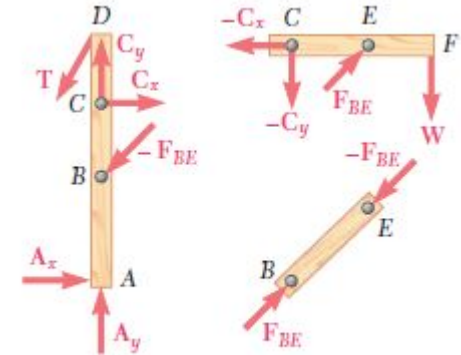
### Multi force members



(a)



(b)

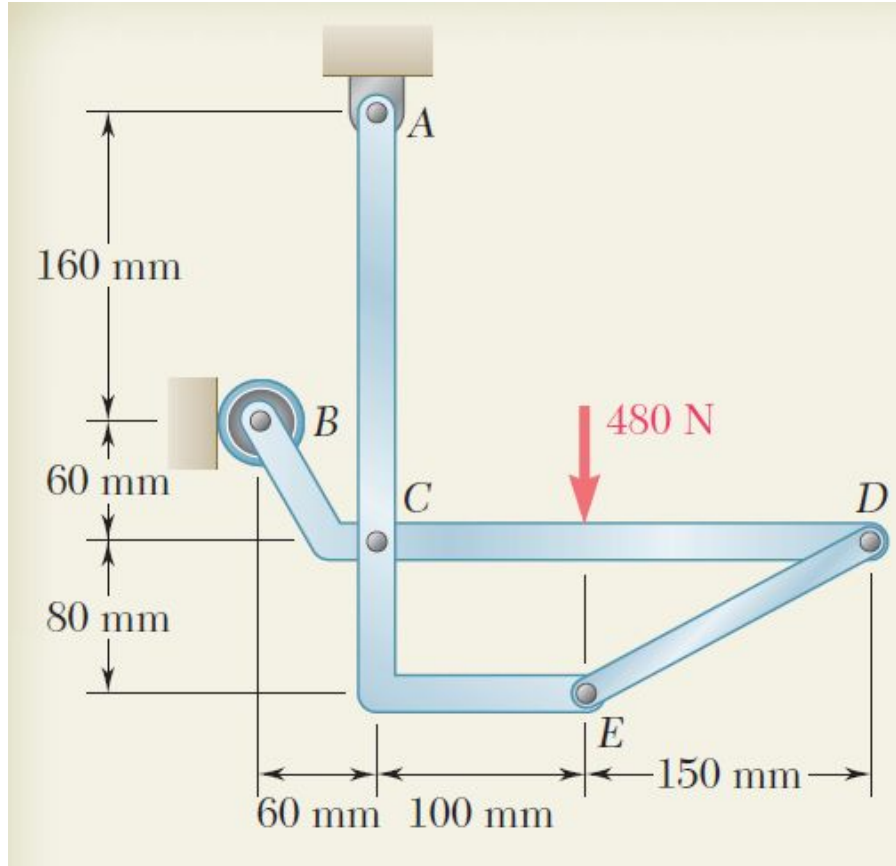


(c)

$$\Sigma \mathbf{F} = 0$$

$$\Sigma \mathbf{M} = 0$$

# Illustration through example

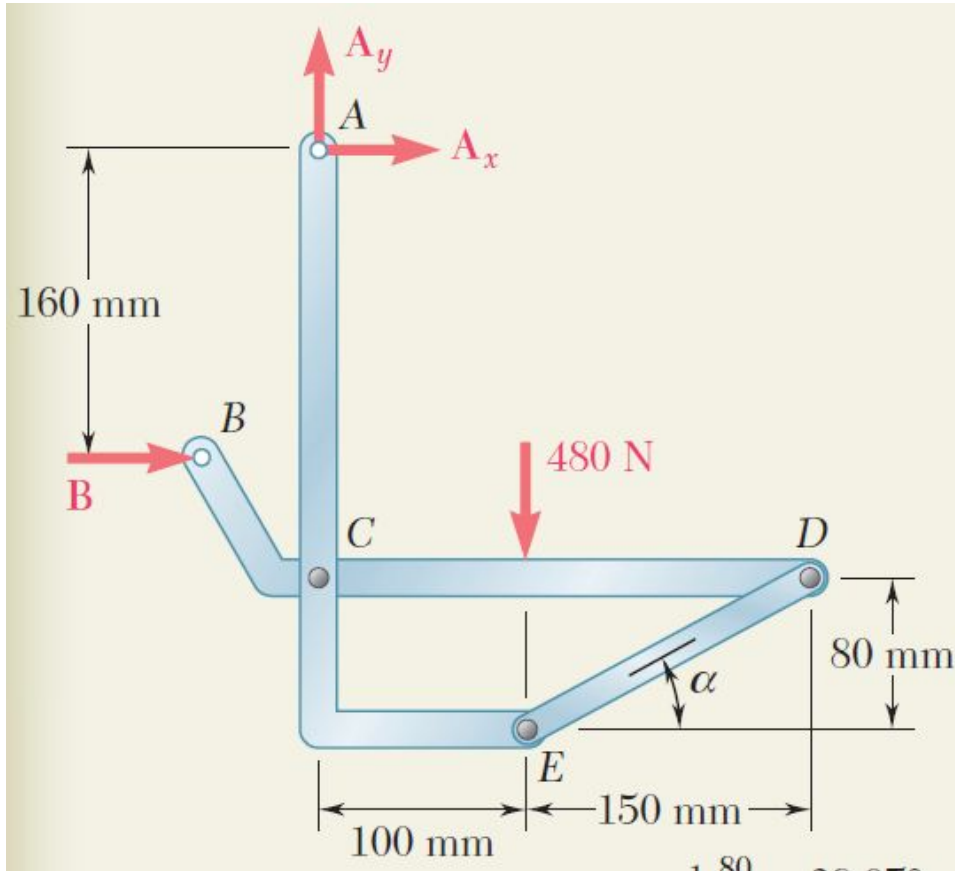


Members ACE and BCD are connected by a pin at C and by the link DE.

Determine:

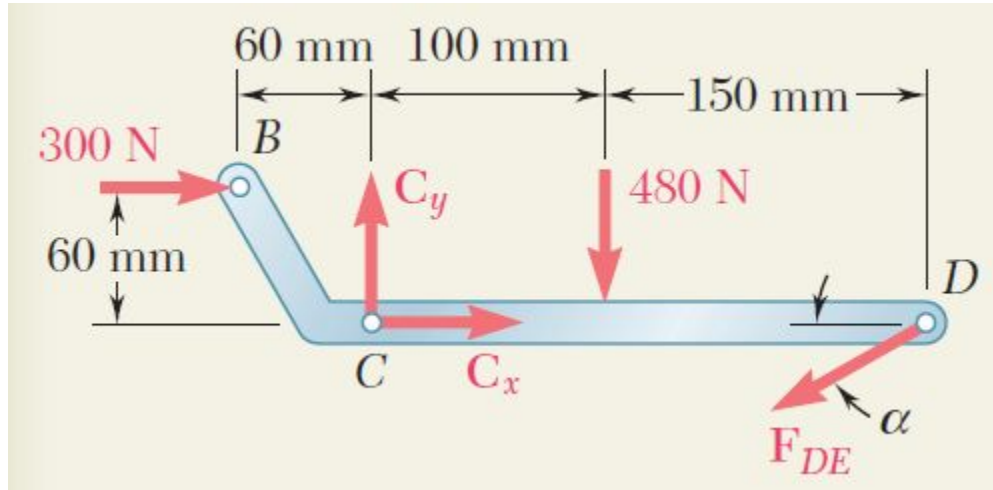
- 1) the force in link DE
- 2) the components of the force exerted at C on member BCD.

# Illustration through example

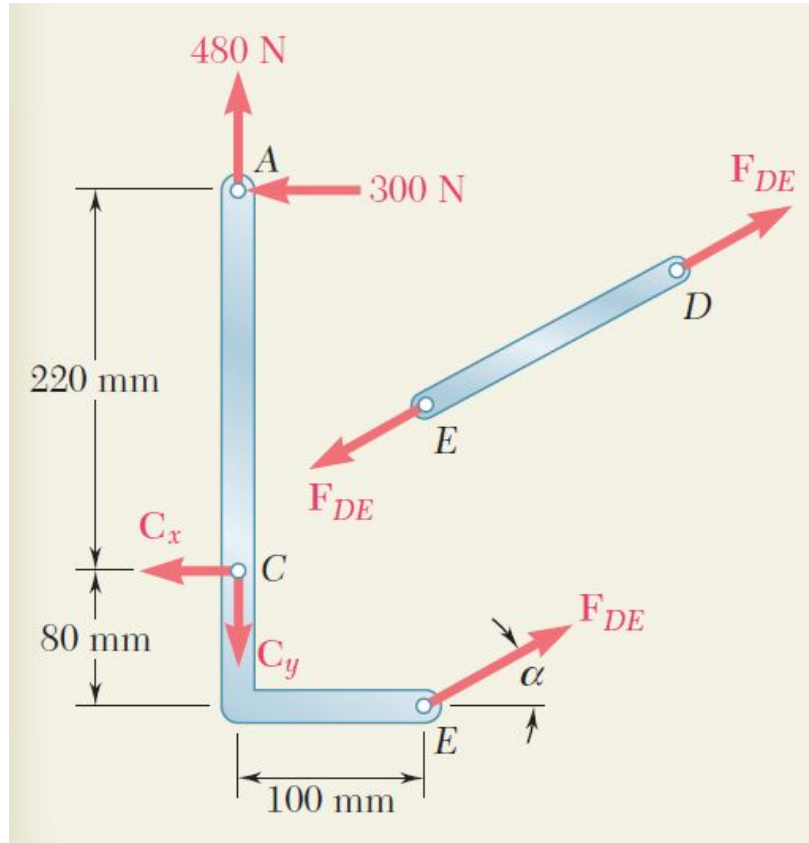


$$\Sigma \mathbf{F} = 0$$
$$\Sigma \mathbf{M} = 0$$

# Analysis through example



# Analysis through example



**Design analysis of a simple frame is demonstrated**