

# To do ...

- Go to discussion — 8% of your grade!
  - Check your grades on compass (—  $\neq$  0)
  - Sign up for Quiz 4 (CBTF next week)
- 
- HW 13 ME due **Thurs**
  - WA 2 due **Fri**
    - **Read instructions!!**

# Frames and machines

Frames and machines are two common types of structures that have at least **one multi-force member** (Recall that trusses have nothing but two-force members).



**Frames** are generally **stationary** and used to support various external loads.

# Frames and machines

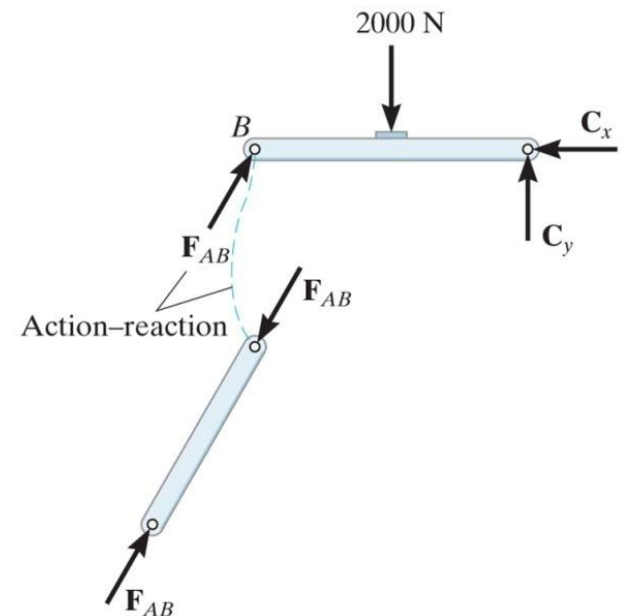
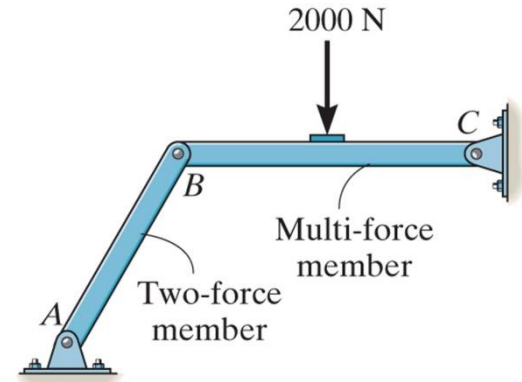
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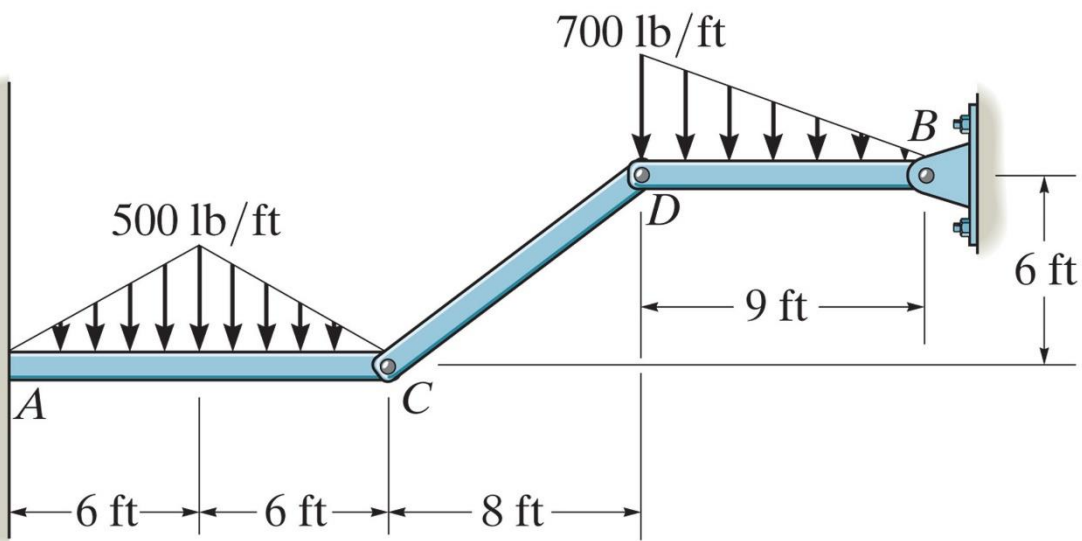


**Machines** contain **moving parts** and are designed to alter the effect of forces

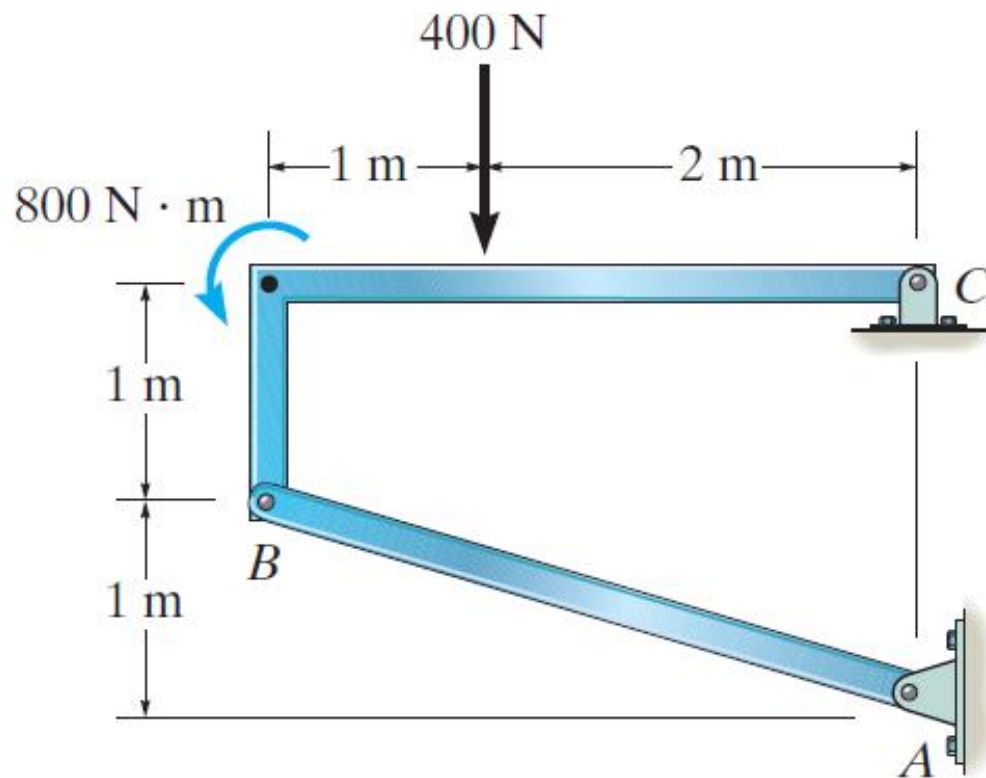
# Frames and machines

The members can be truss elements, beams, pulleys, cables, and other components. The general solution method is the same:





Determine the reactions at supports A and B.



Find the horizontal and vertical components of the pin reactions at *C* and the magnitude of reaction at *B*.