

**Birzeit University**  
**Faculty of Engineering**  
**Department of Civil and Environmental Engineering**

**ENCE 3331, Structural Analysis I**

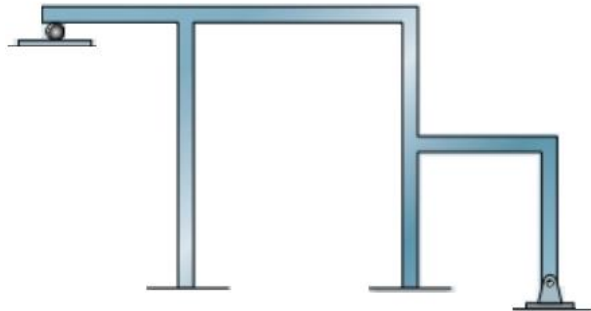
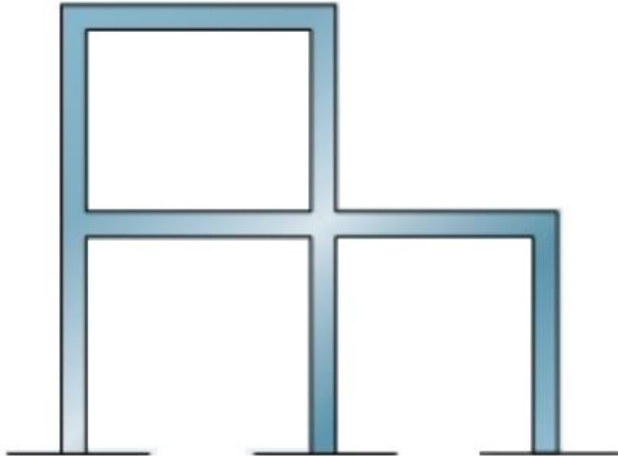
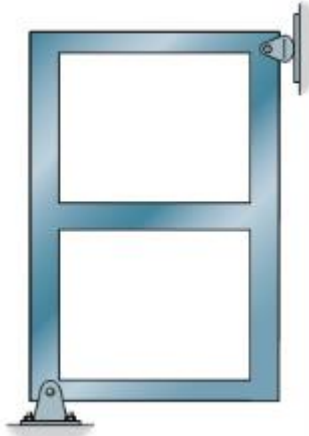
**Homework assignment #2**

**Due on Tuesday, March. 10<sup>th</sup>, 2020 @ 8:30 AM.**

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**Question 1:**

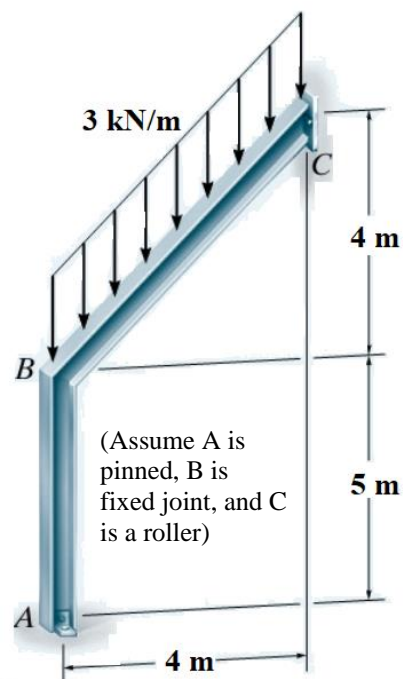
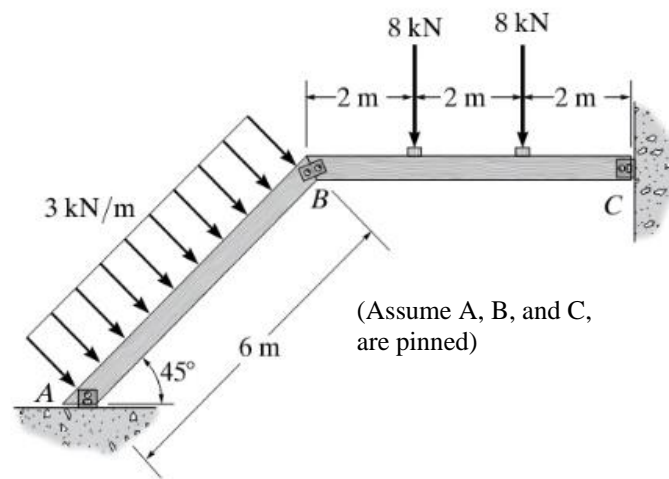
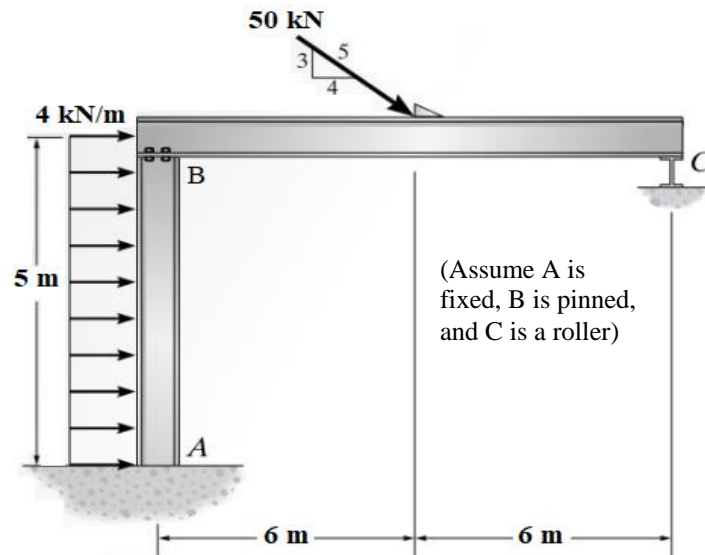
Determine whether the Following Structures are stable/unstable, Determinate/indeterminate?



**Question 2:**

For the given Frames

- Determine the external reaction
- Draw Axial, Shear and moment diagrams
- Sketch the deflected shape.



### Question 3:

For the following Frames:

- Sketch the deflected shape
- Draw shear and moment diagram and indicate key values
- Determine the shear and moment in the frames as a function of  $x$ .

