Announcements

- TAM210 last lecture: Friday, Nov. 3rd
- TAM210 Final: 2 hour exam
  - Location: CBTF
  - Thursday, Nov. 9th through Sunday, Nov. 12th

❑ Upcoming deadlines:

- Tuesday (10/24)
  - PL HW16
- Thursday (10/26)
  - ME HW17

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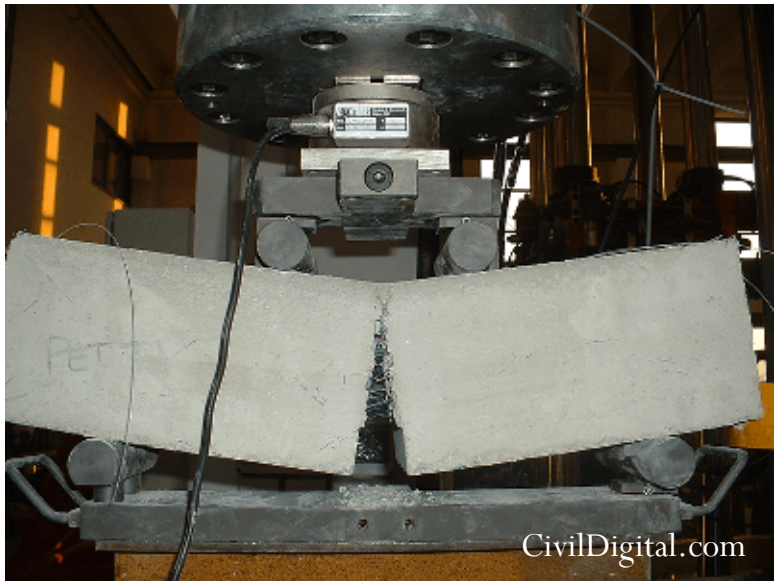
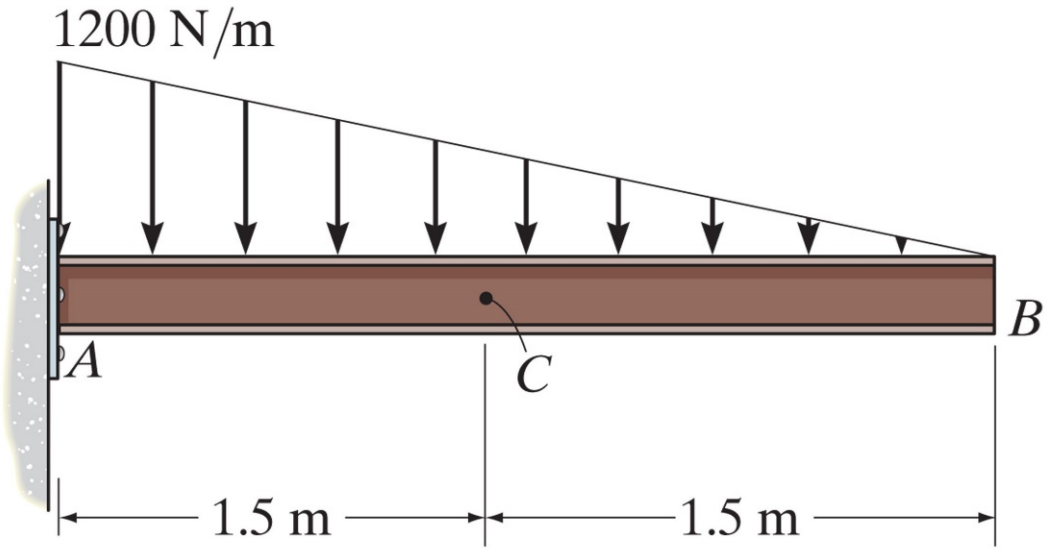
Recap: Internal Forces and Moment





Determine the normal force, shear force, and bending moment at *C* of the beam.

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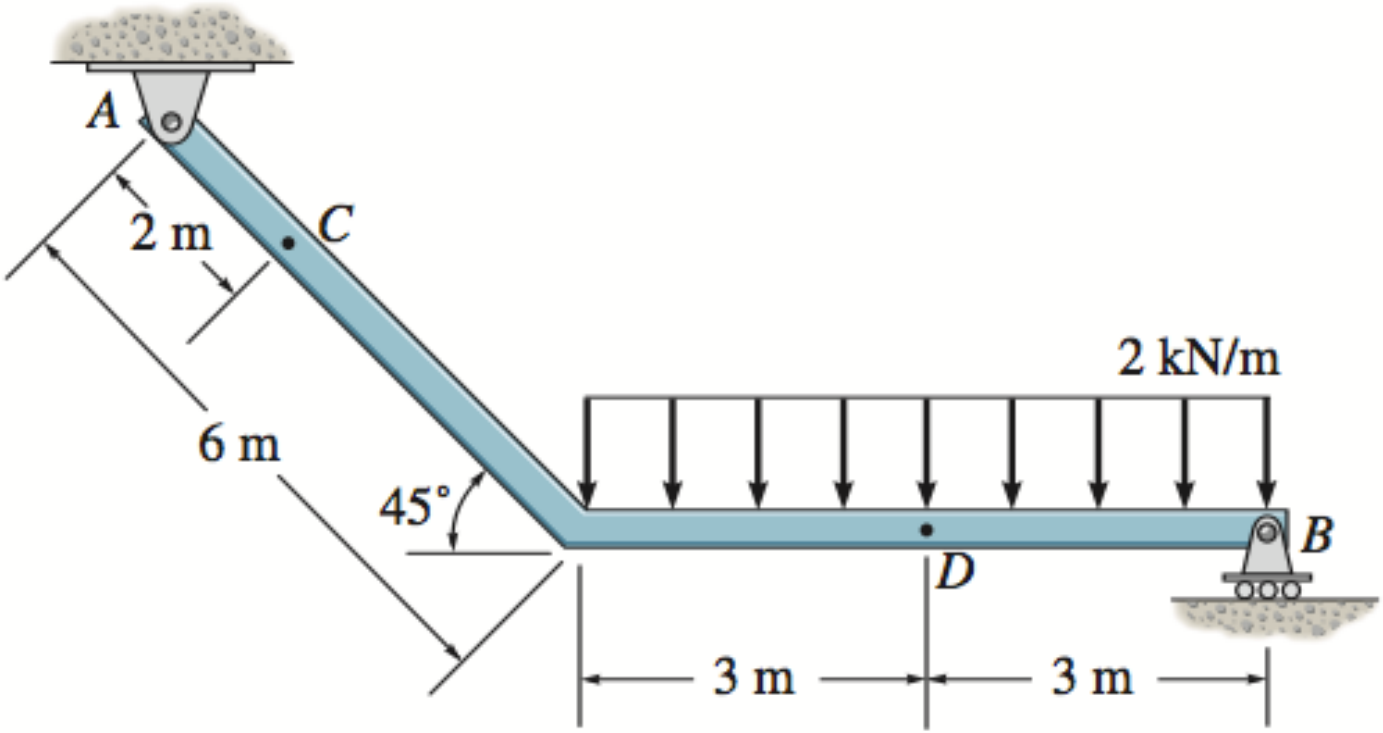
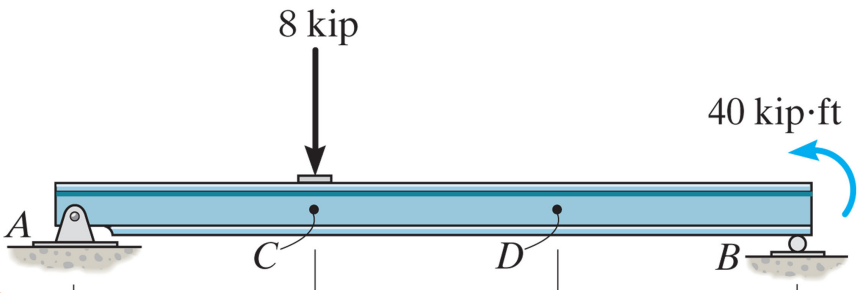


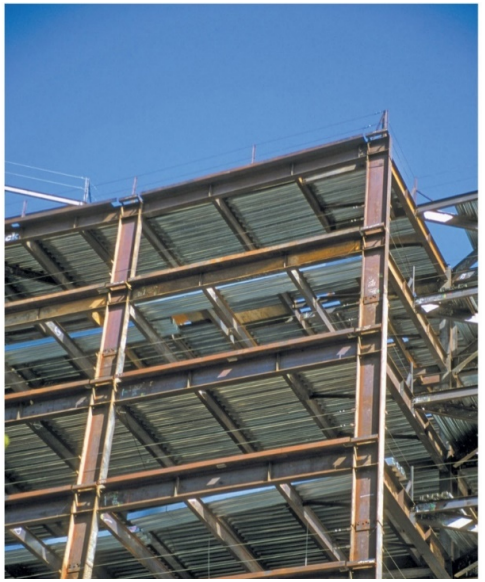
Shear and Moment Diagram

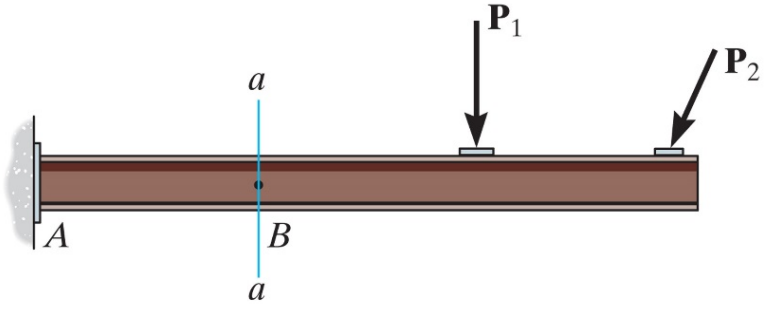
Beams: structural members designed to support loadings applied perpendicular to their axes.

Simply supported beam



Cantilever beam



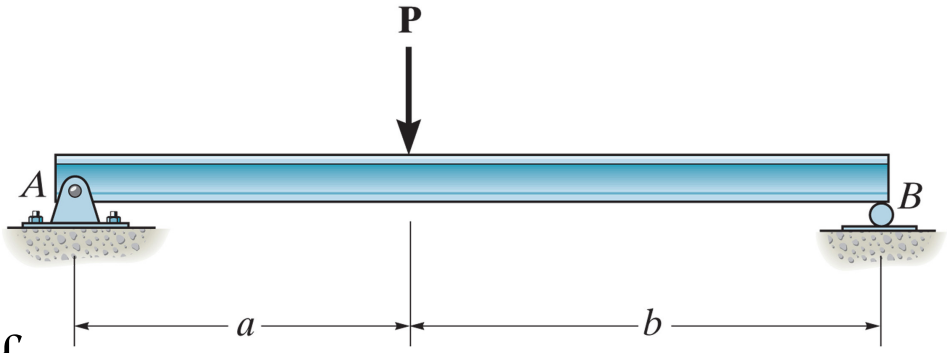


Shear and Moment Diagram

Goal: provide detailed knowledge of the variations of internal loadings (V and M) throughout the beam

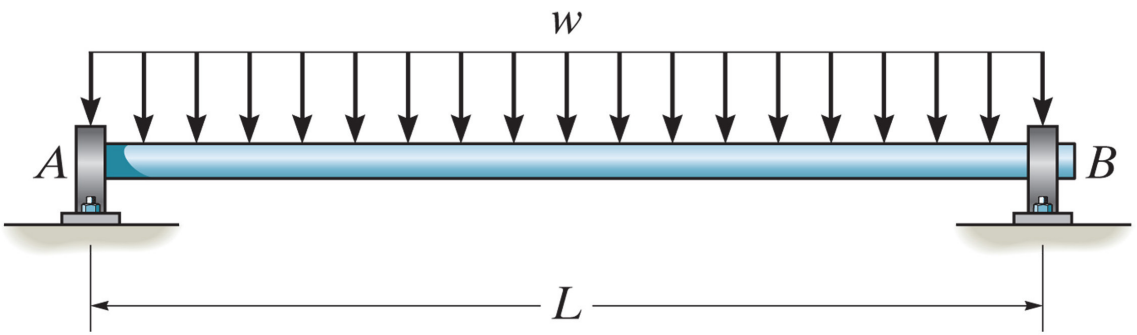
Procedure

1. Find support reactions (free-body diagram of entire structure)
2. Specify coordinates *x*
3. Divide the beam into regions
4. Draw FBD of a segment
5. Apply equations of equilibrium to derive V and M as functions of *x*



Shear and Moment Diagram

Draw the shear and moment diagrams for the beam.



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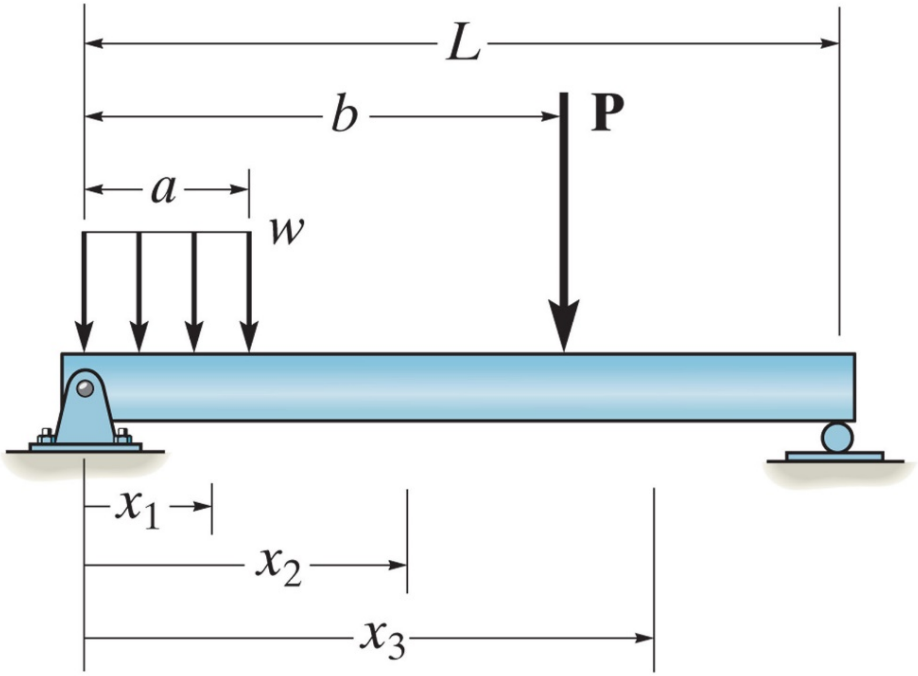

Shear and Moment Diagram

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