Example: Continuous beam with a hinge

Objective: Draw BMDs and SFDs by recognizing basic cases from the formula sheet



Beam BC acts exactly like a simply supported beam, supported without moment restraint at B and C:



Beam AB acts exactly like a cantilevered beam with a point load at the tip; that point load is the shear force from the adjacent beam BC:



That means the complete section force diagrams are:

BMD: 30 KMm 5.625 KM

5FD: 7.5 km/ + +-75 km