

ASSIGNMENT (CHAPTER 3)

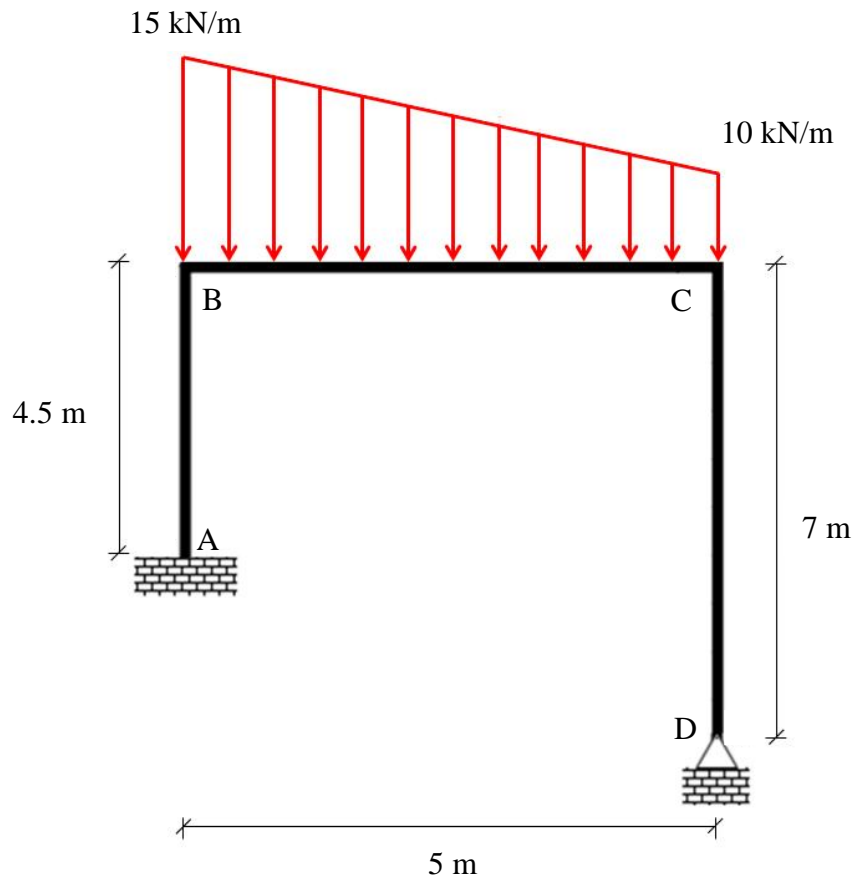


Figure Q2

A nonsymmetrical rigid-jointed portal frame ABCD is fixed at A and pinned to foundation at D. It carries a trapezoidal distributed load acts along beam BC as illustrated in **Figure Q2**. The frame was constructed using same steel section and material. The moment of inertia is $1440(10^6)$ mm⁴ and the Elastic Modulus is 200 GPa.

Using the **MOMENT DISTRIBUTION METHOD**, determine the final bending moments at the ends of each member.

Note: Construct five loops of balance and answer should be given to two decimal points.