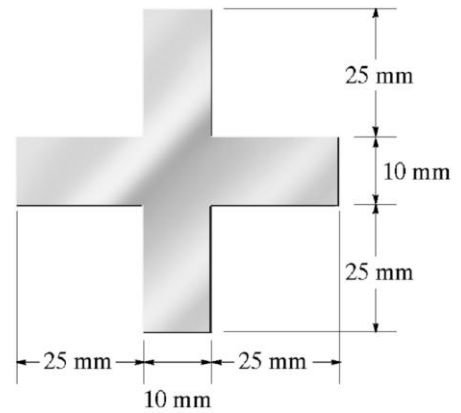


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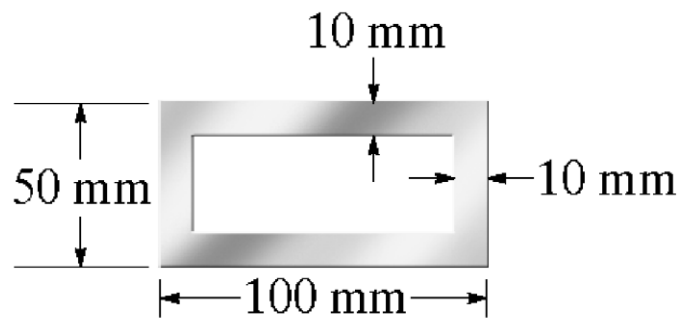
Student ID:

AM30: Euler's Formula

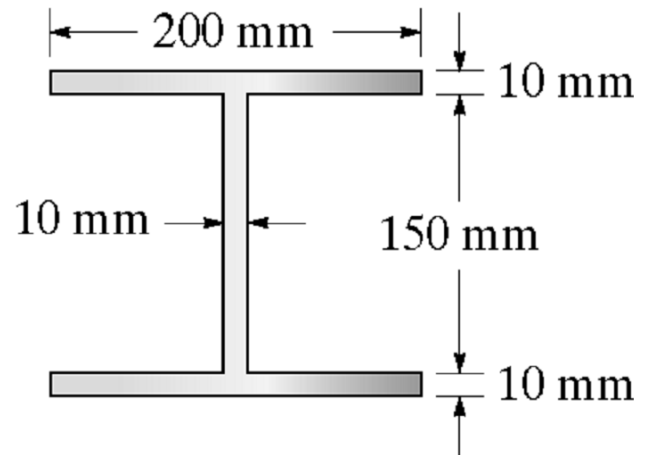
1. A steel column has a length of 4 m and is pinned at both ends. If the cross sectional area has the dimensions shown, determine the critical load. $E = 200 \text{ GPa}$.



2. A steel column has a length of 5 m and is fixed at both ends. If the cross-sectional area has the dimensions shown, determine the critical load. $E = 200 \text{ GPa}$.



3. A steel column has a length of 9 m and is fixed at both ends. If the cross sectional area has the dimensions shown, determine the critical load. $E = 200$ GPa.



4. Determine the maximum load P the frame can support without buckling member AB . Assume that AB is made of steel and is pinned at its ends for y - y axis buckling and fixed at its ends for the x - x axis buckling. $E_{st} = 200$ GPa.

