

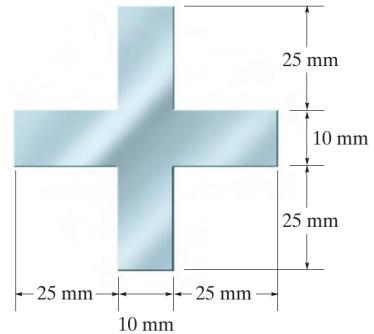
# ENG104: Mechanics of Materials

---

ENG104, HW # 6, Due Friday 06Jun2025 by midnight, on canvas

---

1. An A-36 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.



2. The state of stress at a point is shown on the element. Determine (a) the principal stresses and (b) the maximum in-plane shear stress and average normal stress at the point. Specify the orientation of the element in each case and show the results on each element.

## SOLUTION

In accordance to the established sign Convention,

