ME 323: Mechanics of Materials ***Homework Set H13***

Summer 2025 ***Assigned/Due: July 2/July 8***

Consider the loading on the beam shown below.

a) Determine the reactions at supports A and B.

b) Using the graphical construction method, determine the shear force $V(x)$ over the length of the beam. Sketch $V(x)$ in the plot axis shown below.

c) Using the graphical construction method, determine the bending moment $M(x)$ over the length of the beam. Sketch $M(x)$ in the plot axis shown below.

Use the following in your calculations: $L = 9\,ft$, $p_0 = 10\,kips/ft$, $P_C = 40\,kips$ and $M_D = 90\,ft \cdot kips$.