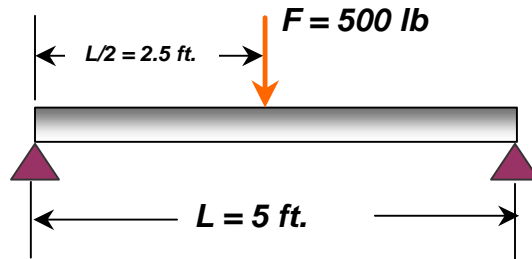


Practice Problem—Deflections by Integration

Solve the following problem using the Method of Integration to find the deflection at any location along the beam.

Find an expression for the **maximum deflection** and **determine its numerical value**. $E = 30 \text{ E6 psi}$, $I = 100 \text{ in.}^4$



List 3 situations, in which you as the engineer, would be concerned about deflections (think of times when you believe too much deflection might keep a machine from operating safely and/or effectively).