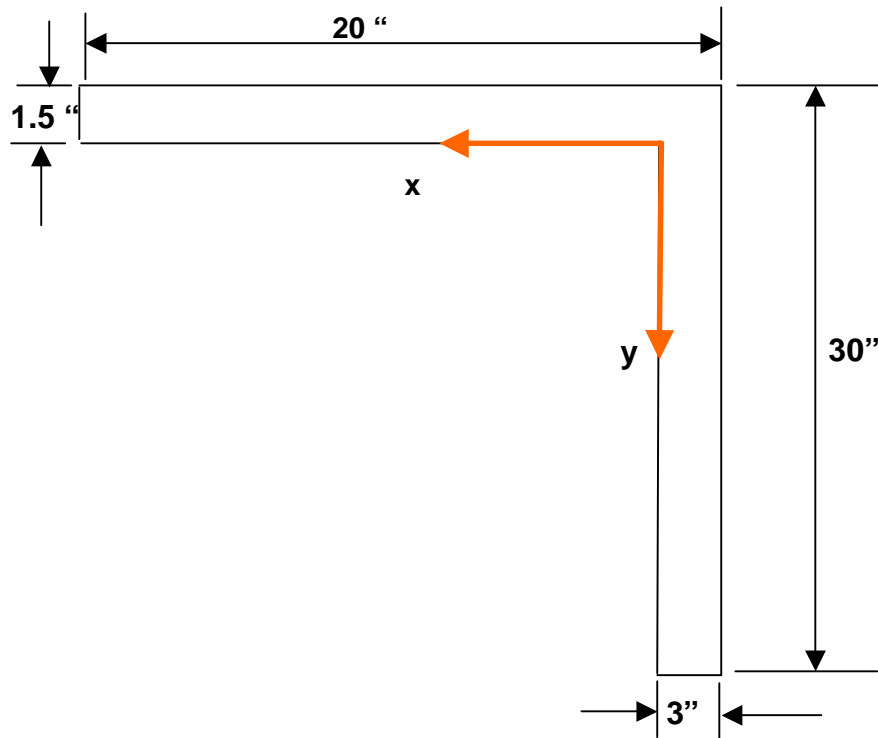


## Problems Session 4

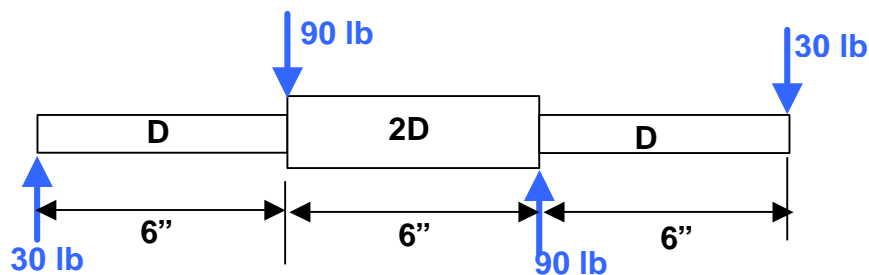
This assignment will reinforce what you have learned about computing the location of neutral axis, composite 2<sup>nd</sup> moments of area, and the use of singularity functions and superposition.

Compute the moment of inertia for the L-section about the centroid x-x and y-y axis.



## Problem 2

Specify the diameter,  $D$ , of the solid shaft shown below, so that the deflection at the 90 lb load is limited to 0.001 inch. The shaft is machined from steel.



### Problem 3

Determine the required diameter to limit the deflection at midspan to 0.2 mm; the stepped shaft is machined from steel.

