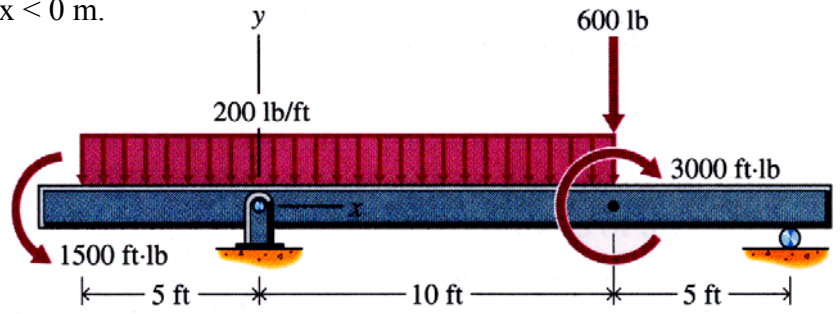
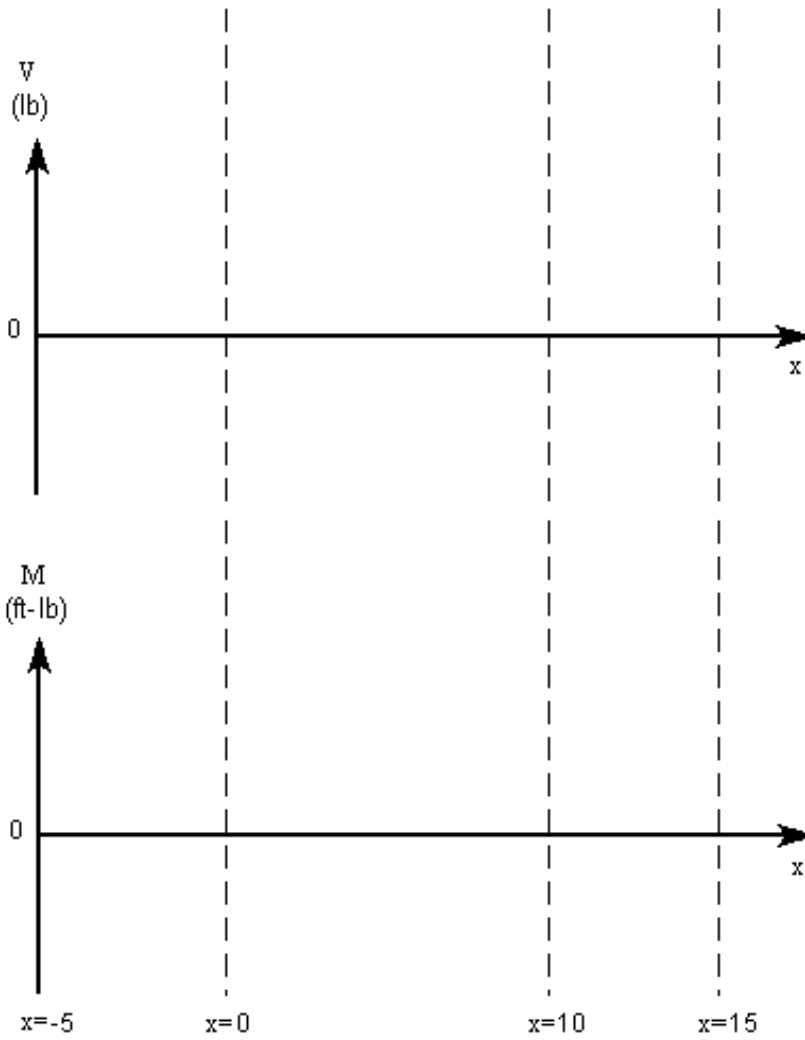
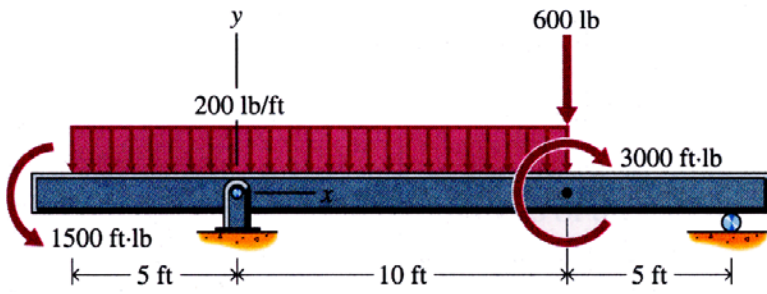


1. Using the coordinate axes shown, write **equations** for the shear force $V(x)$ and bending moment $M(x)$ for the portion of the beam in the interval $-5 < x < 0$.

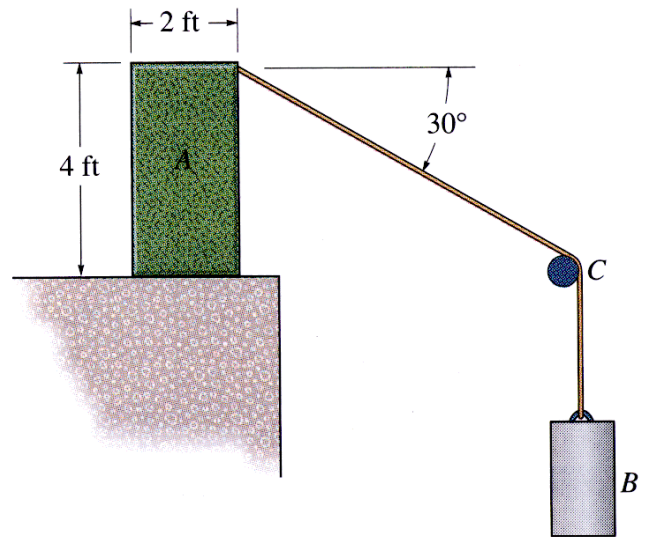
(Look at Problem 2 before proceeding.)



2. Draw **complete** shear and moment diagrams for the beam in Problem 1.



3. Block A has a weight of 100 lb and rests on a surface for which $\mu_s = 0.25$. If the coefficient of static friction between the cord and the fixed peg at C is $\mu_s = 0.3$, determine the greatest weight of the suspended cylinder B without causing motion.



4. Locate the center of gravity of the two-block assembly. The specific weights of the materials A and B are ($\gamma_A = 150 \text{ lb/ft}^3$ and $\gamma_B = 400 \text{ lb/ft}^3$, respectively).

