The beam shown in Fig. supports the unfactored loads shown in the figure. The dead load includes the weight of the beam.

(a) Draw shearing-force diagrams for
   (1) factored dead and live load on the entire length of beam;
   (2) factored dead load on the entire beam plus factored live load between B and C; and
   (3) factored dead load on the entire beam plus factored live load between A and B and between C and D. Loadings (2) and (3) will give the maximum positive and negative shears at B.

(b) Draw the shear-force envelope. The shear at B should be the dead-load shear plus or minus the shear from (6-26).

(c) Design stirrups. Use $f' = 3500$ psi, and let $f_y$ of the stirrups = 40,000 psi.