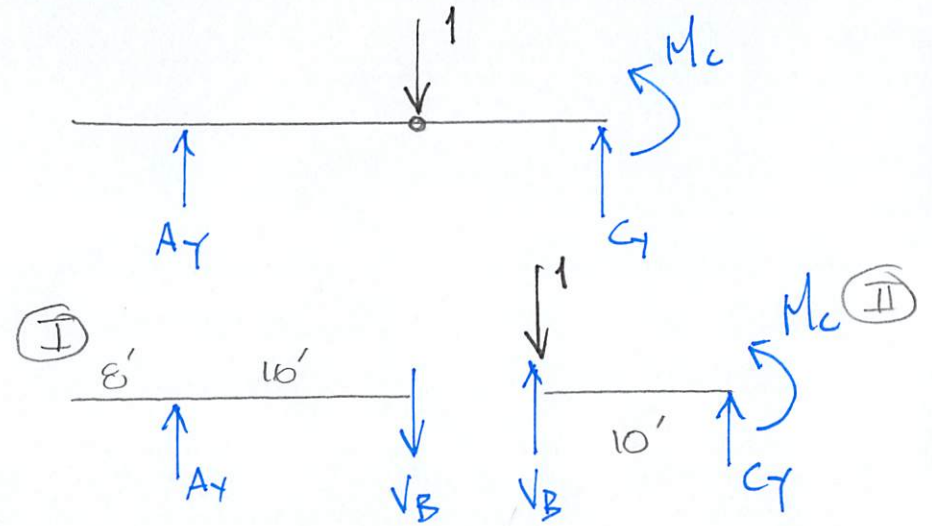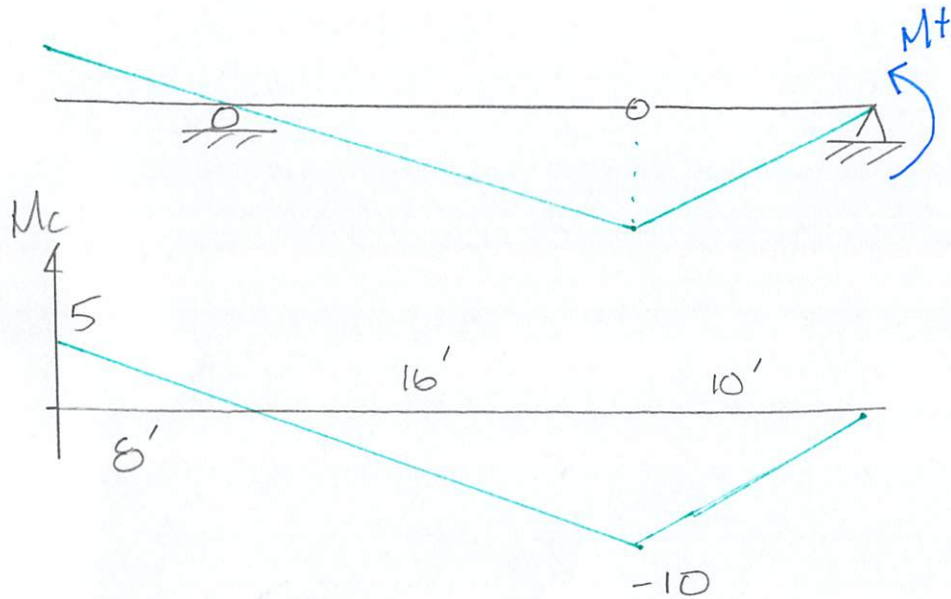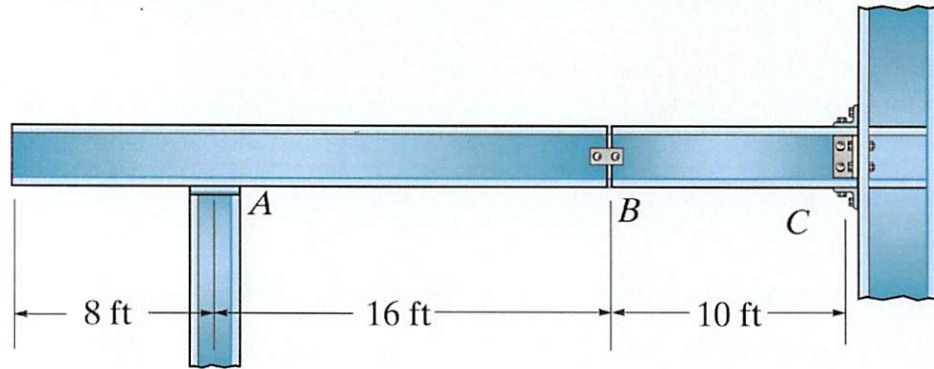**Example 6b-4**: The beam supports a uniform dead load of 200 lb/ft, a uniform live load of 400 lb/ft, and a single live concentrated force of 10 k. Determine (a) the maximum positive moment at C and (b) the maximum positive shear at B.

A   B   C

8 ft ─── 16 ft ─── 10 ft

M_C
4
5
$16'$ $10'$
$8'$
-10

M^+
O
$\downarrow 1$
A_Y
$\textcircled{I}$
$8'$ $16'$
A_Y V_B V_B

$\textcircled{I}$
$+)\sum M_A = 0 = -V_B(16')$

$$V_B = 0$$

$\downarrow 1$ M_C
A_Y C_Y

$\downarrow 1$
$10'$ $M_C \textcircled{II}$
C_Y

$\textcircled{II} \quad +)\sum M_C = 0 = 1(10') + M_C \qquad \underline{M_C = -10'}$