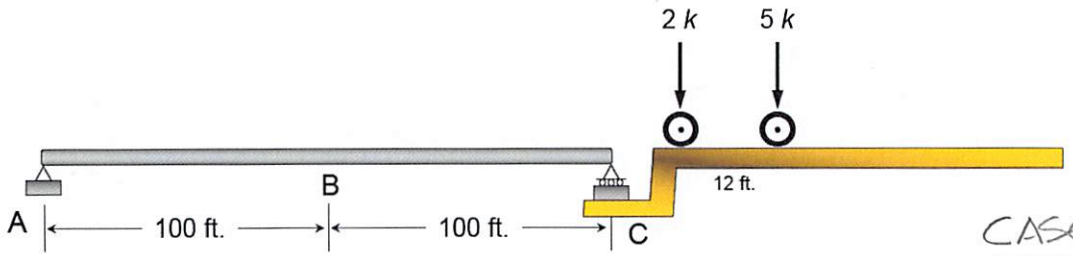
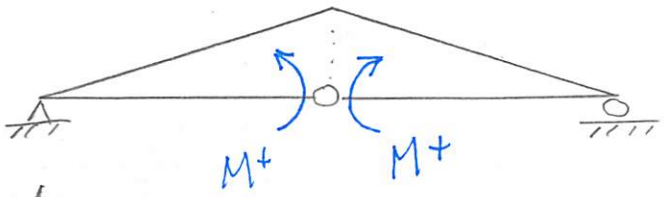
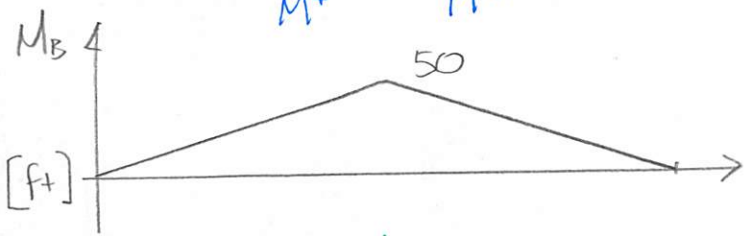
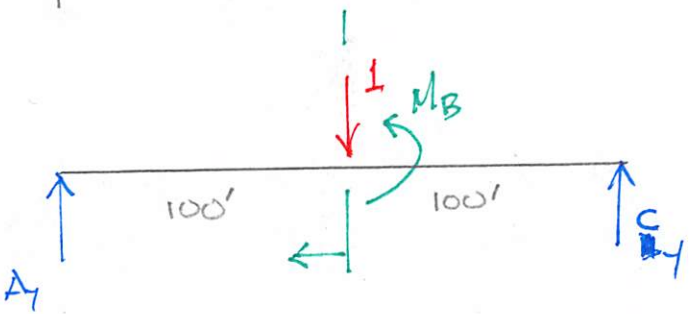
Example 6c-1: Determine the maximum moment created at point B in the beam below due to the wheel loads of a moving truck traveling from right to left.





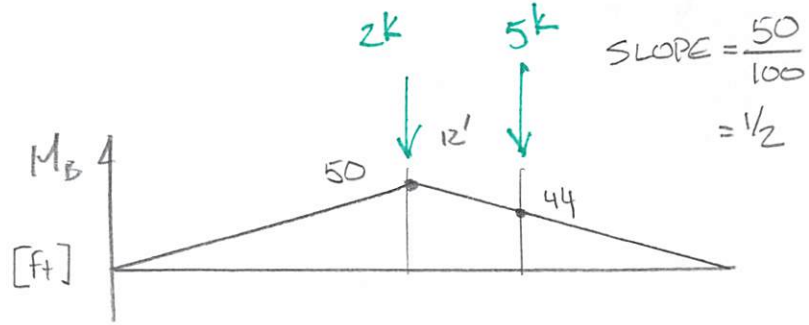




$\circlearrowleft + \sum M_C = 0 = 1(100') - A_y(200')$ $\quad A_y = 1/2$

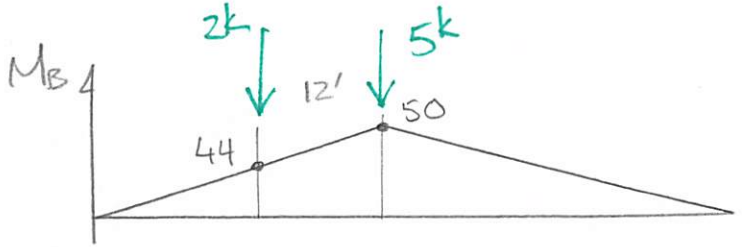
$\circlearrowleft + \sum M_{cut} = 0 = M_B - A_y(100')$ $\quad M_B = 50'$

CASE 1



$M_{B_1} = 2^k(50ft) + 5^k(44ft) = 320^k ft$

CASE 2



$M_{B_2} = 2^k(44ft) + 5^k(50ft) = 338^k ft$

$M_{B_{MAX}} = 338^k ft$