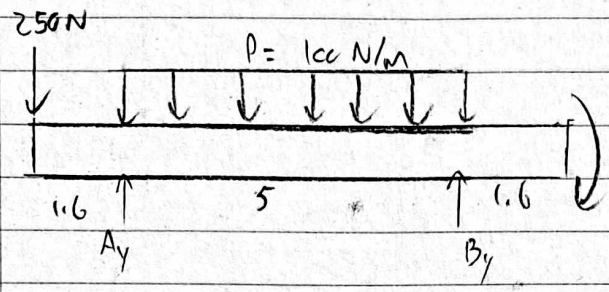
Solution: 21-5-7.3-MH-01



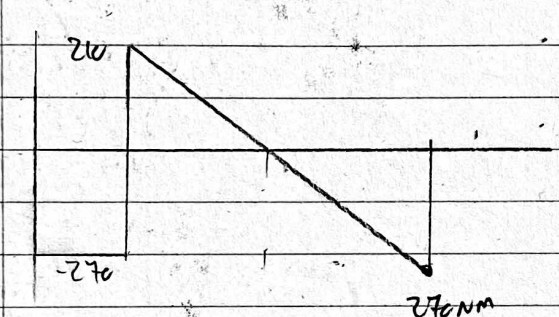
$\Sigma M_A = (250)(1.6) - (100)(5)(2.5) + B_y(5) - 500\ Nm$

$B_y = \frac{(500) + (500)(2.5) - (250)(1.6)}{5}$

$B_y = 270\ Nm$

$A_y = \frac{(100)(5)(2.5) - 500 + (250)(6.6)}{5}$

$A_y = 460\ Nm$



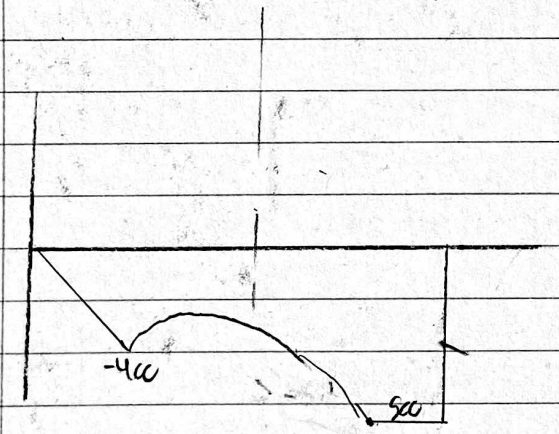
$V_A = -270 + 460 = 230$

$V_B = 230 - 100x = 230 - 100(5)$

$V_B = 270Nm$

$V_{min} \Rightarrow 0 = 230 - 100x$

$x = \frac{230}{100} = 2.3\ m$



$M_A = -250(1.6) = -400$

$M_B = -400 + \int 230 - 100x$

$M_B = -400 + 230x - \frac{100x^2}{2} \Rightarrow -400 + 230(5) - \frac{100(5)^2}{2} = -500$

$M_{x_1} = -400 + 230(2.3) - \frac{100(2.3)^2}{2} = \boxed{-135.5\ Nm}$