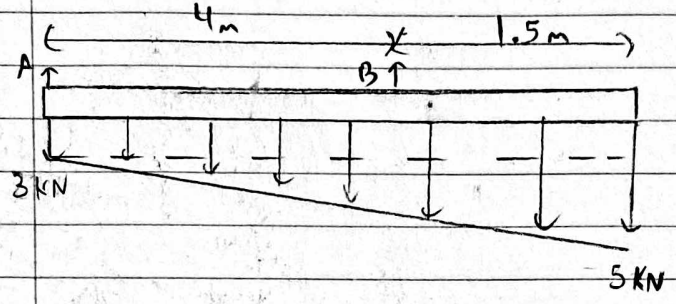
Solutions: 21-5-4.9-MR-05



find resultant force:

$F_R = -(3kN)(5.5m) - \frac{1}{2}(2kN)(5.5m) = -22kN$

$d = \frac{(3kN)(5.5m)(\frac{5.75m}{2}) + (2kN)(\frac{1}{2})(5.5m)(\frac{2}{3})(5.5m)}{22kN}$

$d = 2.979m$ from A

$\Sigma M_A = -(2.979m)(22kN) + B_y(4m) \rightarrow B_y = 16.38\,kN$

$\Sigma M_B = -A_y(4) + 22kN(4 - 2.979m) \rightarrow A_y = 5.615\,kN$