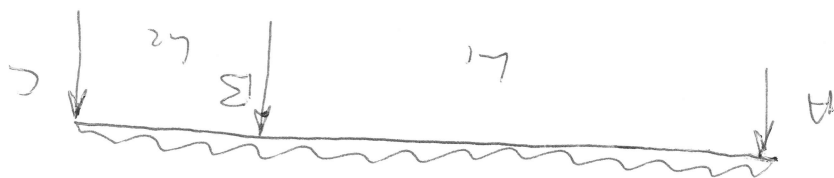


1.



$$L_2 = 0.5m$$

$$L_1 = 2.5m$$

$$M_A \& M_C = 0$$

∴

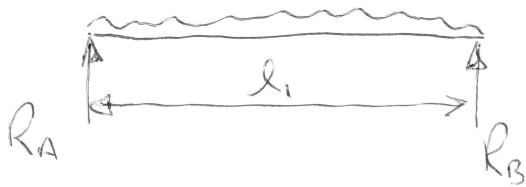
$$2M_B(L_1 + L_2) = -\frac{w_1 L_1^3}{4} - \frac{w_2 L_2^3}{4}$$

$$2M_B(2.5 + 0.5) = -\frac{397.65 \times 2.5^3}{4} - \frac{397.65 \times 0.5^3}{4}$$

$$2M_B = \frac{-1565.746875}{(2.5 + 0.5)} = -521.915625Nm$$

$$M_B = \frac{-521.915625Nm}{2} = -260.9578125Nm$$

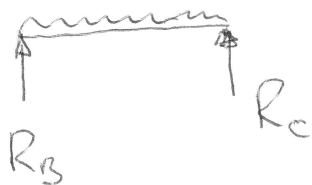
2.



$$M_B = -260.96 \text{ Nm}$$

$$\therefore R_A \times l_1 - \frac{w l_1^2}{2} = M_B = -260.96$$

$$\underline{\underline{R_A = 392.6785 \text{ N}}}$$



$$-R_C l_2 + \frac{w l_2^2}{2} = M_B = -260.96$$

$$\underline{\underline{R_C = 422.5075 \text{ N}}}$$

$$R_B = (397.65 \times (l_1 + l_2)) - R_A - R_C = \underline{\underline{377.764 \text{ N}}}$$