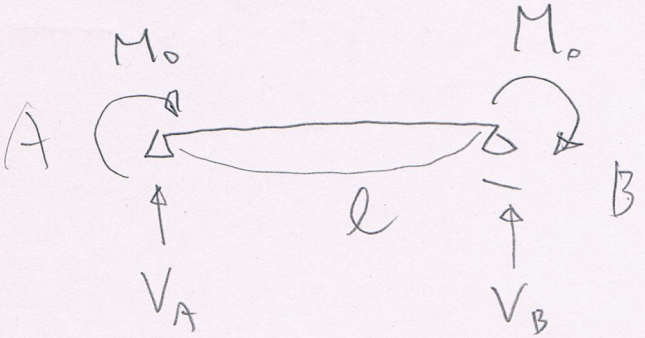
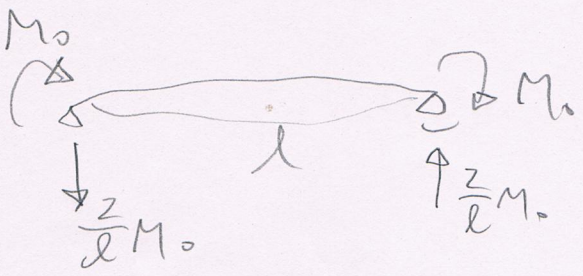


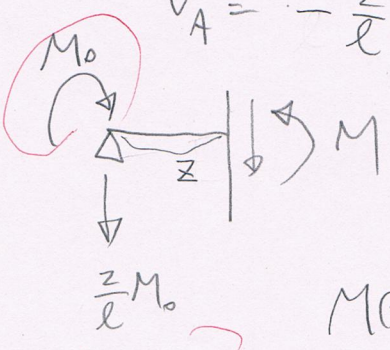
$$\Sigma \uparrow = V_A + V_B = 0$$

$$\Sigma \circlearrowleft_A = -V_B \ell + M_0 + M_0 = 0$$

$$V_B = \frac{2}{\ell} M_0$$

$$V_A = -\frac{2}{\ell} M_0$$

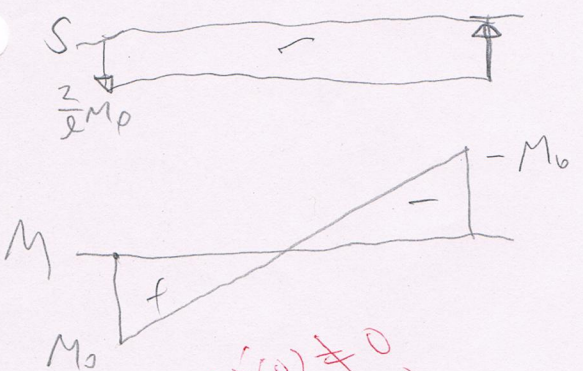




$$\Sigma \circlearrowleft_z = \frac{2}{\ell} M_0 z + M - M_0 = 0$$

$$M(z) = -\frac{2}{\ell} M_0 z + M_0$$

$$w'' = -\frac{M}{EI}$$



$$w'(0) \neq 0$$

$$w''(0) \neq 0$$

$$w(0) = 0 \qquad w(\ell) = 0$$

$$+EIw'' = -\frac{2}{\ell} M_0 z + M_0$$

$$EIw'' = \frac{2}{\ell} M_0 z - M_0$$

$$EIw' = \frac{M_0}{\ell} z^2 - M_0 z + A$$

$$EIw = \frac{M_0}{3\ell} z^3 - \frac{M_0}{2} z^2 + Az + B$$

$$EIw(0) = \beta = 0$$

$$EIw(\ell) = \underbrace{\frac{M_0}{3}\ell^2 - \frac{M_0}{2}\ell^2}_{-\frac{M_0\ell^2}{6}} + A\ell = 0 \qquad A = \frac{M_0 \ell}{6}$$

$$EIw(z) = \frac{M_0}{3\ell} z^3 - \frac{M_0}{2} z^2 + \frac{M_0 \ell}{6} z$$

$$w(z) = \frac{M_0}{6\ell EI}\left(2z^3 - 3\ell z^2 + \ell^2 z\right)$$

$$w' = \frac{M_0}{6\ell EI}\left(6z^2 - 6\ell z\right)$$

$$w'' = \frac{M_0}{\ell EI}\left(2z - \ell\right)$$

$$M = \frac{M_0}{\ell}\left(\ell - 2z\right)$$