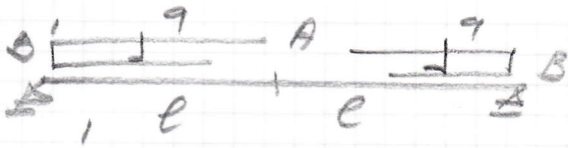
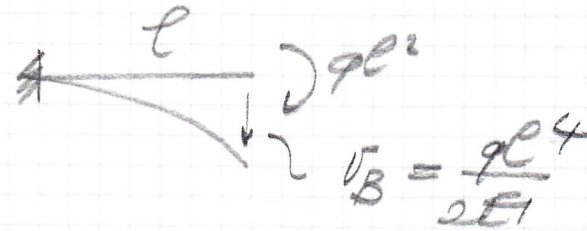
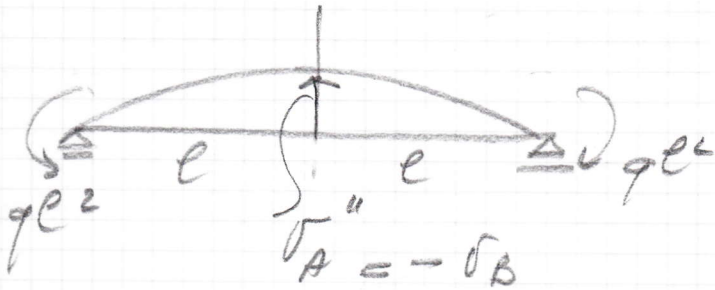


$$\underline{V_A} = C_2 = -\frac{7}{24} q l^4 / EI$$

$$\underline{f_B} = -\frac{1}{EI} \left(\frac{q l^3}{2} + \frac{q l^3}{6} \right) = -\frac{2 q l^3}{3 EI} = -\frac{d v(z)}{dz}$$



$$V_A = \frac{5}{384} q 16 l^4$$

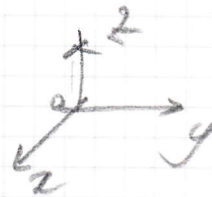
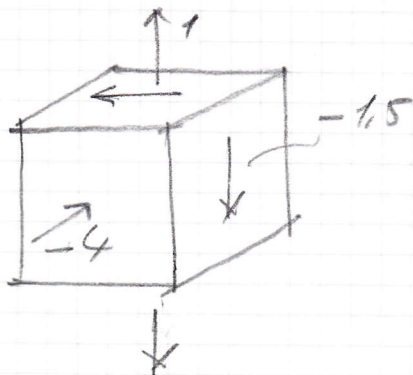


$$\underline{V_A} = \frac{80 q l^4}{384 EI} - \frac{q l^4}{2 EI} = -\frac{112 q l^4}{384 EI} = -\frac{7}{24} \frac{q l^4}{EI}$$

$$f_B' = \frac{q \cdot 8 l^3}{24 EI} = \frac{q l^3}{3 EI}$$

$$f_B'' = -\frac{q l^2}{EI} \quad \underline{f_B} = \frac{q l^3}{3 EI} - \frac{q l^3}{EI} = -\frac{2 q l^3}{3 EI}$$

3.2)



$$\sigma_x > \sigma_y$$

$$\begin{bmatrix} -\sigma_n & -1.5 \\ -1.5 & 1-\sigma_n \end{bmatrix} \begin{bmatrix} n_y \\ n_z \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \end{bmatrix}$$

$$-\sigma_n (1-\sigma_n) - 1.5^2 = -\sigma_n + \sigma_n^2 - 1.5^2 = 0$$

$$\sigma_n = \frac{1 \pm \sqrt{1 + 4 \cdot 1.5^2}}{2} = \frac{1 \pm \sqrt{10}}{2} \begin{cases} 2.08 = \sigma_3 \\ -1.08 = \sigma_2 \end{cases}$$