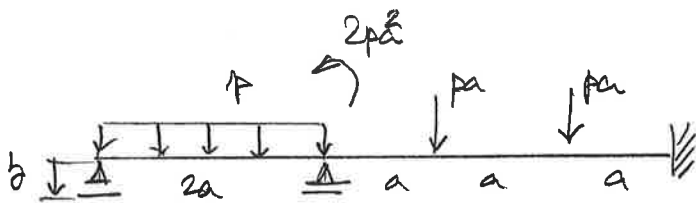
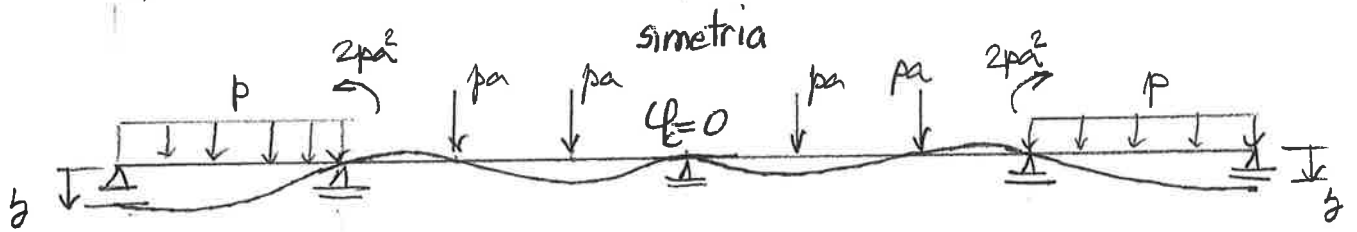
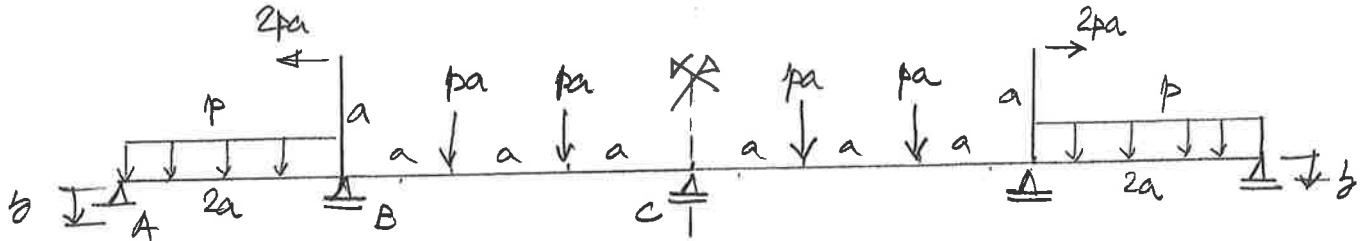


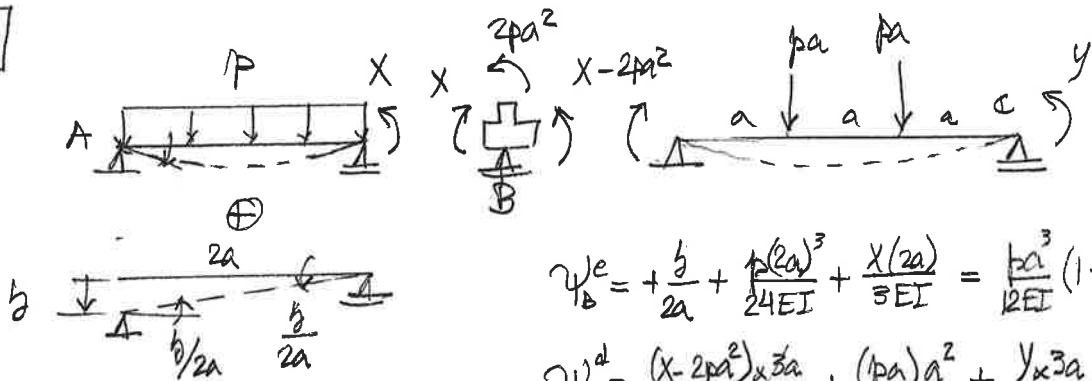
Ex.2 recalque
simetria



$$\psi_B^e = -\psi_B^d \quad \psi_C = 0$$

$$j = \frac{pa^4}{6EI}$$

EIF



$$\psi_B^e = +\frac{j}{2a} + \frac{p(2a)^3}{24EI} + \frac{X(2a)}{3EI} = \frac{pa^3}{12EI}(1+4) + \frac{2Xa}{3EI}$$

$$\psi_B^d = \frac{(X-2pa^2) \times 3a}{3EI} + \frac{(pa)a^2}{EI} + \frac{Y \times 3a}{6EI}$$

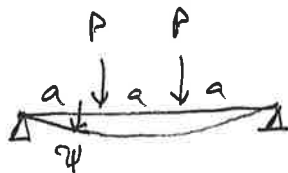
$$= \frac{Xa}{EI} + \frac{Ya}{2EI} + (-2+1) \frac{pa^3}{EI}$$

$$= \frac{Xa}{EI} + \frac{Ya}{2EI} - \frac{pa^3}{EI}$$

$$\psi_C = \frac{(X-2pa^2) \times 3a}{6EI} + \frac{(pa)a^2}{EI} + \frac{Y \times 3a}{3EI}$$

$$= \frac{Xa}{2EI} + \frac{Ya}{EI} + (-1+1) \frac{pa^3}{EI}$$

Obs



$$\psi = \frac{P \cdot a(2a)(3a+2a)}{3 \cdot 6EI \times 3a} + \frac{P(2a)a(3a+a)}{6EI \times 3a}$$

$$= \left(\frac{5}{9} + \frac{4}{9}\right) \frac{Pa^2}{EI} = \frac{Pa^2}{EI}$$

Eqs. de compatibili

$$\psi_B^e = -\psi_B^d \Rightarrow \frac{5}{12} pa^2 + \frac{2}{3} X = -X - \frac{Y}{2} + pa^2 \Rightarrow \frac{5}{3} X + \frac{Y}{2} = \frac{7}{12} pa^2 \quad (1)$$

$$\psi_C = 0 \Rightarrow \frac{X}{2} + Y = 0 \Rightarrow X = -2Y \quad (2)$$

$$(2) \Rightarrow (1) : \quad -\frac{10}{3}y + \frac{y}{2} = \frac{7}{12}pa^2 \Rightarrow \frac{-20+3}{6}y = \frac{7}{12}pa^2$$

$$y = -\frac{7}{34}pa^2$$

(-0,206pa²)

$$X = \frac{14}{34}pa^2$$

(+0,412pa²)

$$X - 2pa^2 = -\frac{54}{34}pa^2$$

(-1,588pa²)

$$\frac{p(2a)^2}{8} = \frac{pa^2}{2}$$

