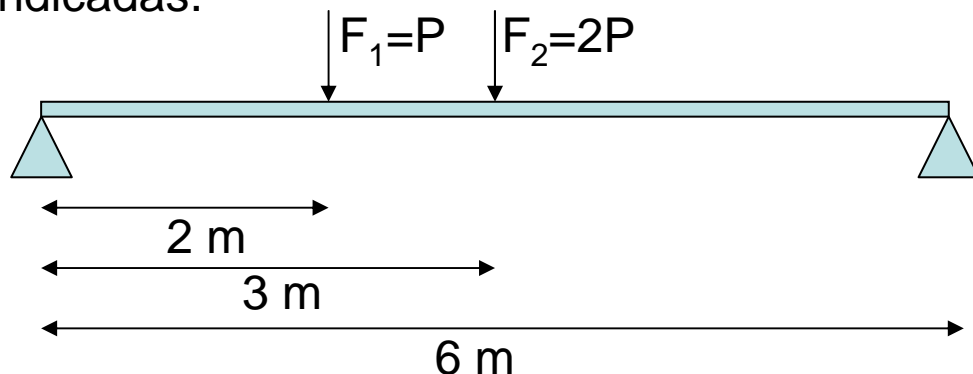


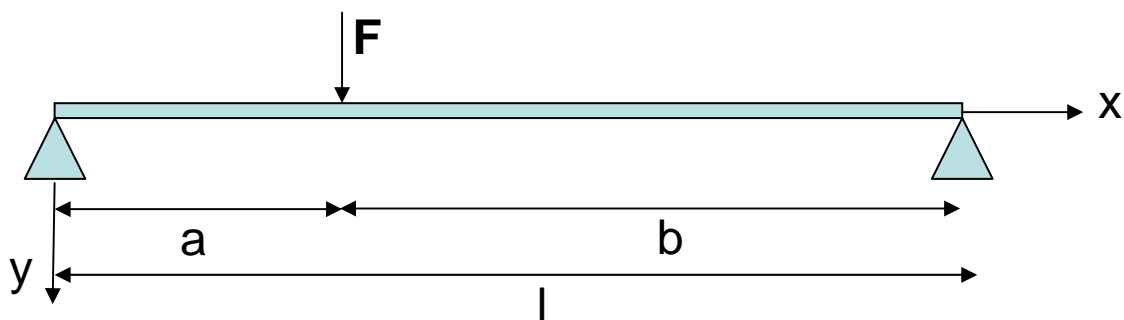
Ejercicio 6.2

Determinar los coeficientes de influencia, de la siguiente viga sometida a las acciones indicadas.



sabiendo que está realizada con un material de módulo de elasticidad E y que el momento de inercia de su sección transversal es I .

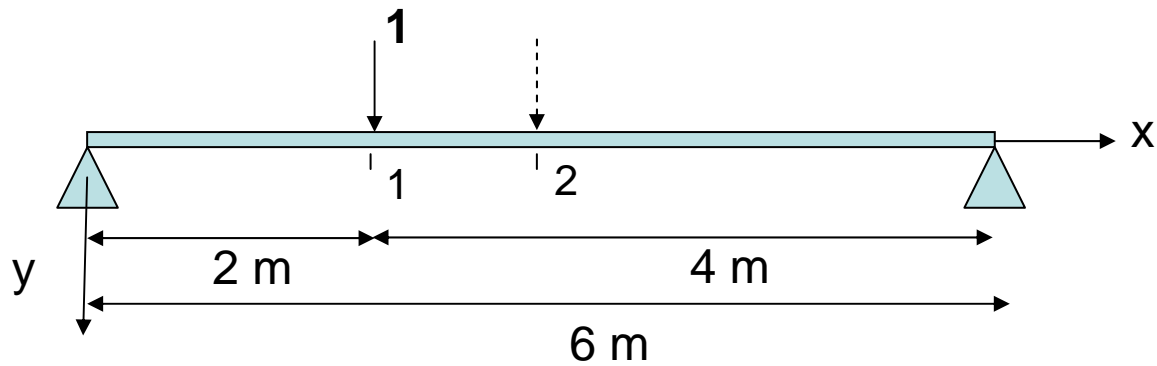
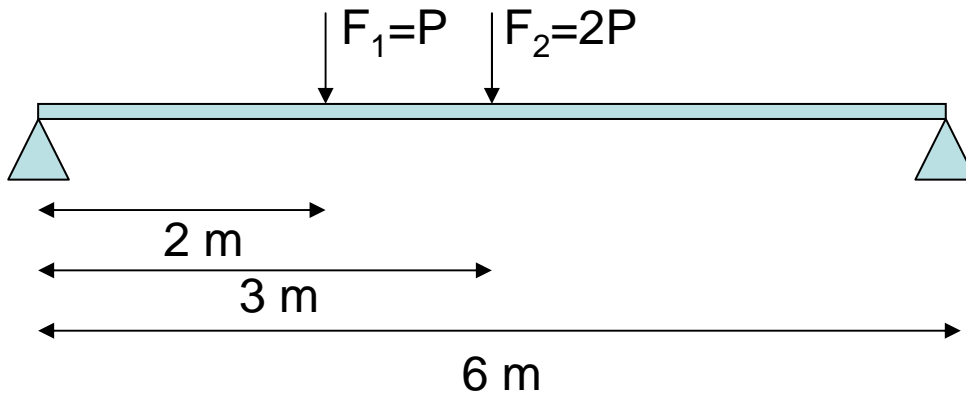
DATOS:



Ecuación de la elástica:

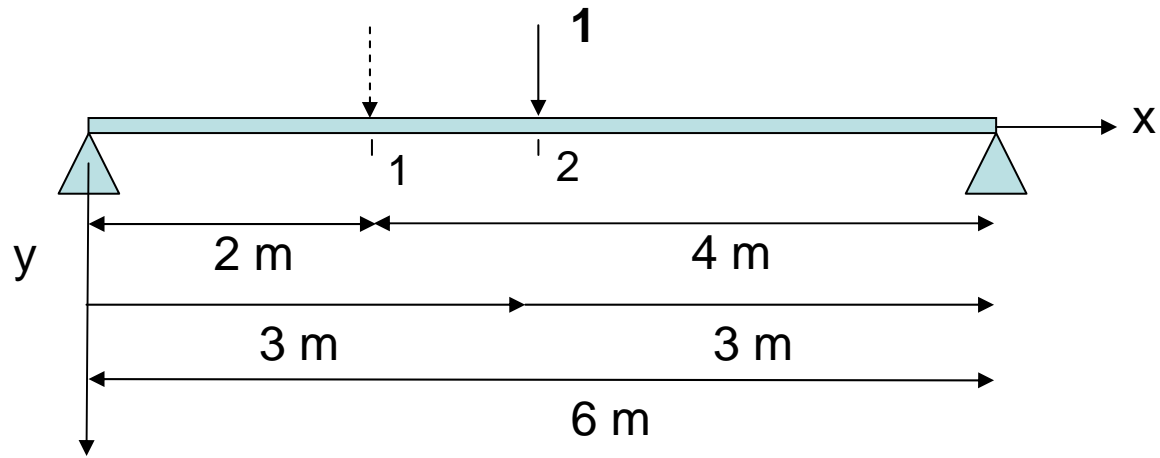
$$d = \frac{Flbx}{6EI} \left(1 - \frac{b^2}{l^2} - \frac{x^2}{l^2} \right) \quad \text{para} \quad 0 \leq x \leq a$$

$$d = \frac{Fla(l-x)}{6EI} \left(1 - \frac{a^2}{l^2} - \left(\frac{l-x}{l} \right)^2 \right) \quad \text{para} \quad a \leq x \leq l$$



$$d_{11} = \frac{1 \cdot 6 \cdot 4 \cdot 2}{6EI} \left(1 - \frac{4^2}{6^2} - \frac{2^2}{6^2} \right) = 3,56 \frac{1}{EI}$$

$$d_{21} = \frac{1 \cdot 6 \cdot 2 \cdot (6-3)}{6EI} \left(1 - \frac{2^2}{6^2} - \left(\frac{6-3}{6} \right)^2 \right) = 3,83 \frac{1}{EI}$$



$$d_{12} = \frac{1 \cdot 6 \cdot 3 \cdot 2}{6EI} \left(1 - \frac{3^2}{6^2} - \frac{2^2}{6^2} \right) = 3,83 \frac{1}{EI}$$

$$d_{22} = \frac{1 \cdot 6 \cdot 3 \cdot 3}{6EI} \left(1 - \frac{3^2}{6^2} - \frac{3^2}{6^2} \right) = 4,5 \frac{1}{EI}$$