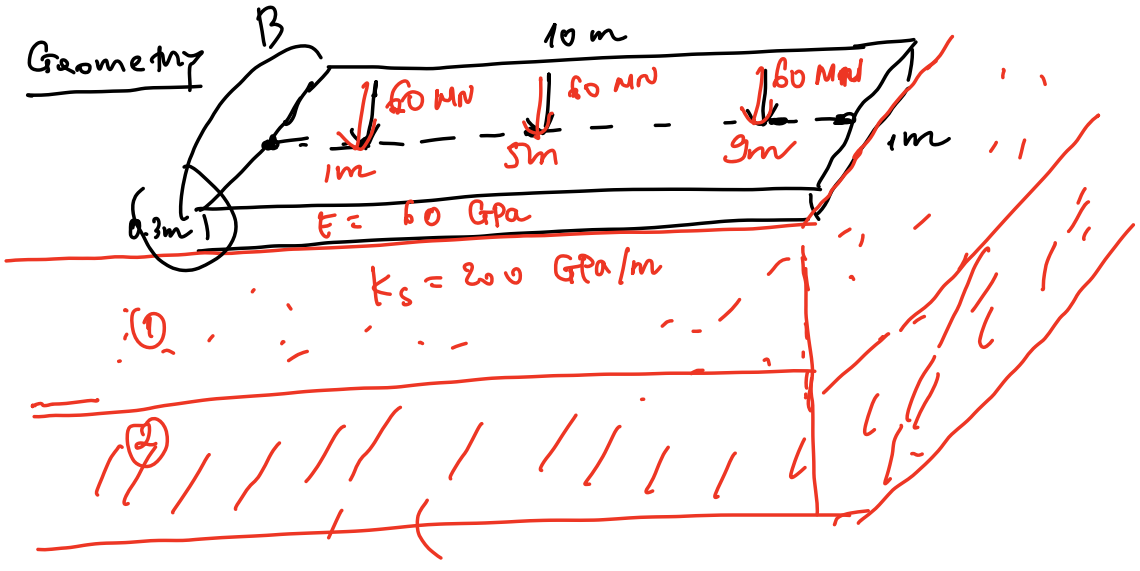
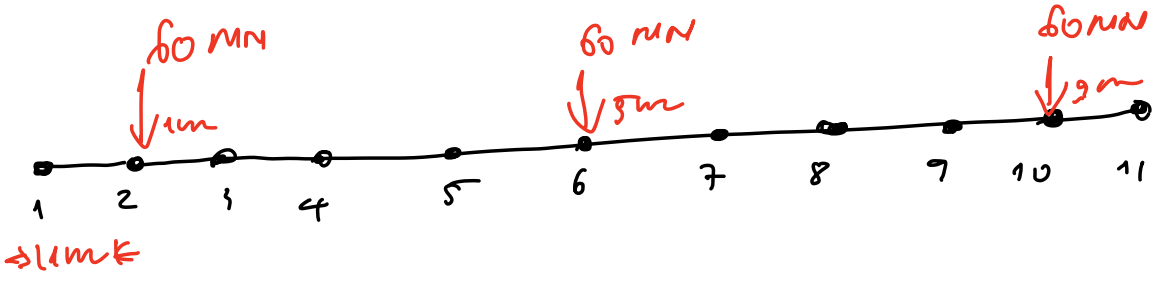
Mat foundation using the concept of "beam on elastic foundation".



find:

(1) deflection distribution of the mat foundation

(2) pressure distribution of the soil beneath the mat foundation



Model parameter:

RC

$E = 60\ GPa = 60E3\ MPa$

$I = \frac{(1.0)(0.3)^3}{12} = 2.3E\text{-}3\ (m^4)$

$h = 0.3\ m$

Soil (Sub ground)

$k_s = 200\ GPa/m$

$= 200E3\ MN/m$