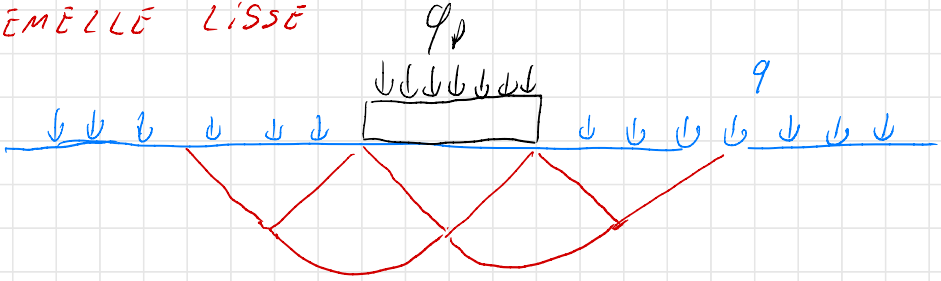
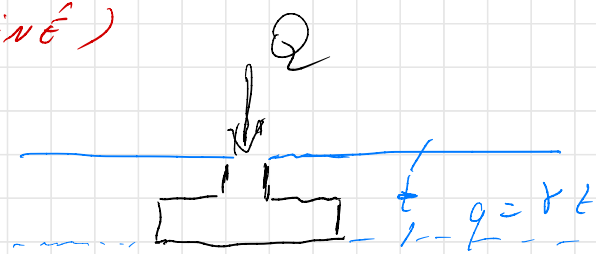
WEEK 4

FONDATIONS SUPERFICIELLES

(X) CAS COURT-TERME (NON-DRAINÉ)

SEMELLE LISSE





$$q_p = (\pi + 2)\, C_u + q$$

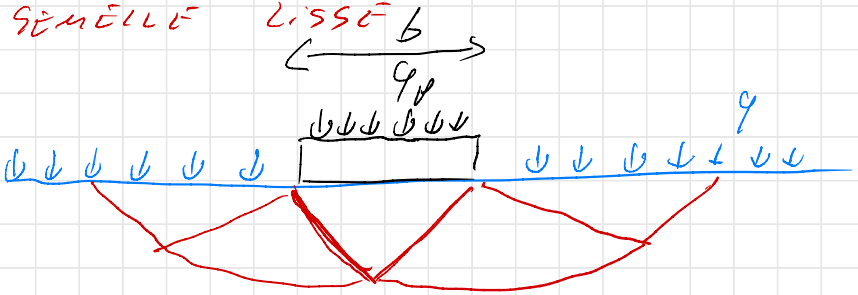
q_p = Capacité portante

Quiz En Non-drainé FORME GÉOMÉTRIQUE des bandes de cisaillement?

1) Droite
2) Spirales log + Droite
3) Arc de cercle + DROITE ✓

⊗ CAS LONG-TERME / DRAINÉE

SEMELLE LISSE



c' ϕ'

$$q_p = \underbrace{N_c\, c'}_{\text{cohésion}} + \underbrace{N_q\, q}_{\substack{\text{Surcharge} \\ \text{latérale} \\ \text{CONFINEMENT}}} + \underbrace{\frac{1}{2}\gamma b N_\gamma}_{\substack{\text{Poids du Sol} \\ \text{en mouvement}}}$$

$$N_c = (N_q - 1)\cot an \phi'$$

$$N_q = e^{\pi \tan \phi'} \tan^2\left(\frac{\pi}{4} + \frac{\phi'}{2}\right)$$

$$N_\gamma = 1.8(N_q - 1)\tan\phi'$$

INCLINAISON de la CHARGE

EN COUPE

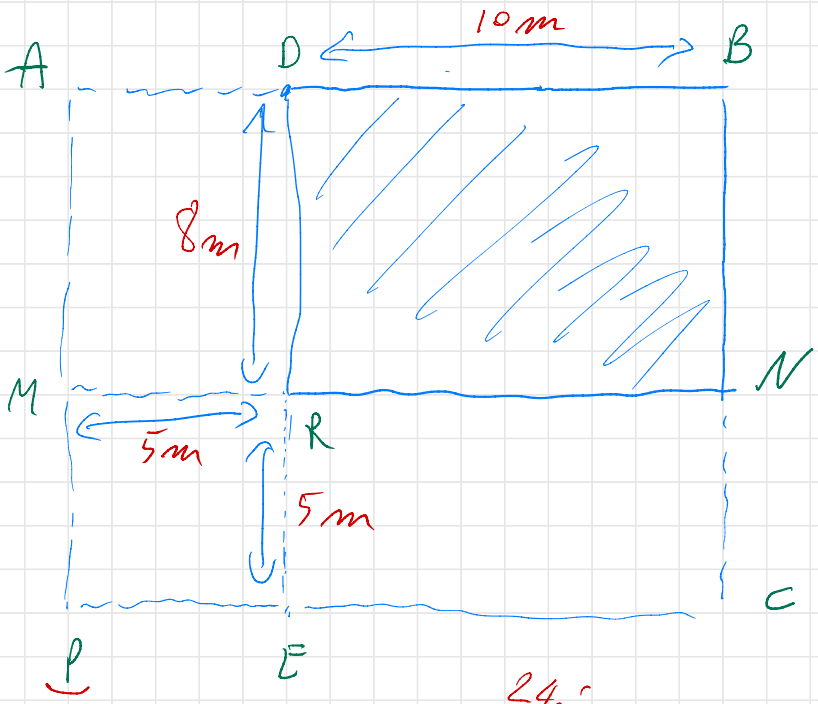
EN PLAN

m_b

m_l

$m = m_l \cos^2 \theta + m_b \sin^2 \theta$

SUPERPOSITION ELASTICITÉ



$q = 100\ kPa$

$z = 5\ m$

$\sigma_{zz}(P, z=5m) = q\ I_P$

$\sim$ 1.2 kPa

~~2.57 kPa~~

24.

$$I_P = I_{ABCP} - I_{MNCP} - I_{ADEP} + I_{MREP}$$

10.02

9.99