

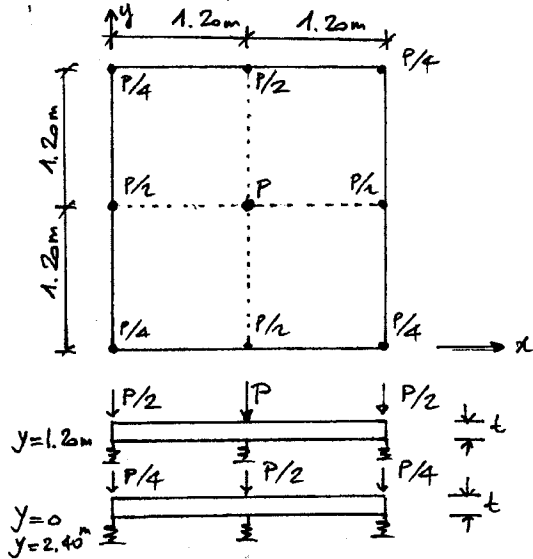
FINITE ELEMENT METHOD * HOME WORK 6

- 1) a) Determine the soil stresses at each node point of the embedded plate given in figure for the given loads.
 b) Calculate the plate moments at each node point.

Notes: Use 4 elements totally.

Use double symmetry.

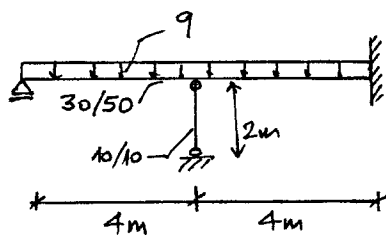
$E=30000 \text{ MPa}$, $\mu = 0.20$, $t=0.25 \text{ m}$, $P=40 \text{ kN}$, $K= 12000 \text{ kN/m}^3$ (Soil embedding coefficient)



- 2) Calculate the axial force in the pin jointed bar and draw the shear force and moment diagram of the beam.

Use 2 elements totally.

$E=32000 \text{ MPa}$, $t=0.25 \text{ m}$, $q= 30 \text{ kN/m}$.



Submittal date: In the final exam.