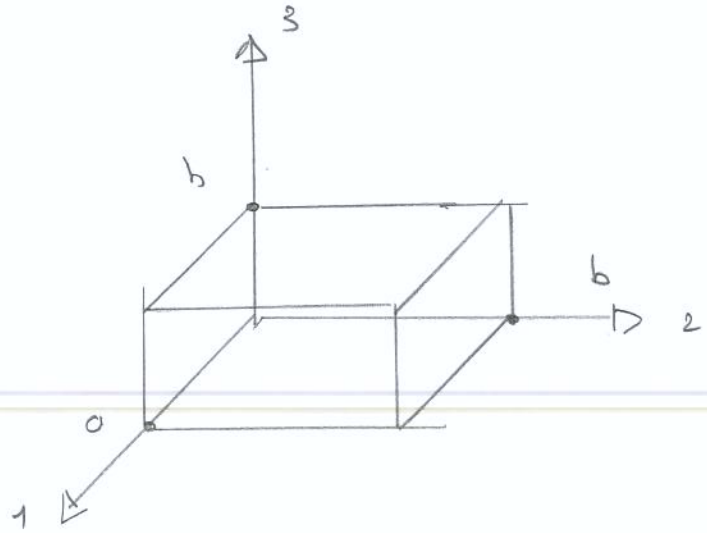
Practice on stresses and static admissibility.

Problem 1

We consider the continuum Ω in its present configuration.

$$\Omega = \{0 \leq x_1 \leq a \; ; \; 0 \leq x_2 \leq b \; ; \; 0 \leq x_3 \leq h\}$$



$\partial\Omega$ is the boundary of the domain Ω.

1) What are the surface tractions over the boundary $\partial\Omega$ when the stress state is $\underline{\underline{\sigma}} = \sigma(\underline{e}_3 \otimes \underline{e}_3)$?

2) What are the surface tractions over the boundary $\partial\Omega$ when the stress state is: $\underline{\underline{\sigma}}(\underline{x}) = \tau(\underline{e}_1 \otimes \underline{e}_3 + \underline{e}_3 \otimes \underline{e}_1)$?