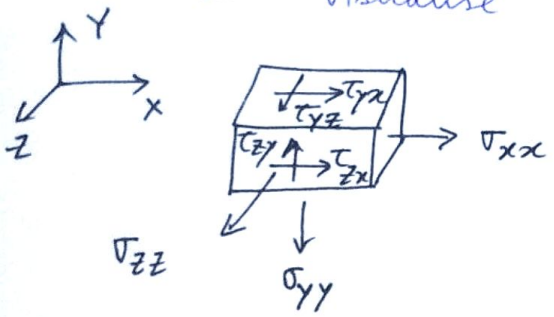
Practice Problem - 1

- 3D - Stresses are acting on a body as follows:

$\sigma_{xx} = 90$ MPa ; $\tau_{xy} = \tau_{yx} = 0$; $\tau_{yz} = \tau_{zy} = 0$; $\tau_{xz} = \tau_{zx} = 95$ MPa

$\sigma_{yy} = 96$ MPa ; $\sigma_{zz} = -50$ MPa.

You can visualise the stresses as follows.



$$S = \begin{bmatrix} 90 & 0 & 95 \\ 0 & 96 & 0 \\ 95 & 0 & -50 \end{bmatrix}$$

Write a function - definition in Python that takes the stress tensor 'S' as an input argument and plots the 3D - Mohr Circle for that particular case

{ Hint : Check for any NumPy function to calculate the eigen values of the stress tensor }