

# Principal stresses

The stress state for a material point is given in a Cartesian basis  $(\underline{e}_1, \underline{e}_2, \underline{e}_3)$  by:

$$[\underline{\sigma}] = \begin{bmatrix} 2 & 10 & 0 \\ 10 & 0 & 8 \\ 0 & 8 & 0 \end{bmatrix} \quad (1)$$

Calculate the principal stresses and the principal directions for this stress tensor.