

Anticommutator example

Show that

$$\{\Sigma_i, \Sigma_j\} = 2\delta_{ij}$$

where

$$\Sigma_i = \begin{pmatrix} \sigma_i & 0 \\ 0 & \sigma_i \end{pmatrix}$$

and σ_i are the Pauli spin matrices.

Notes on the Eigenmath script:

1. The Σ_i matrices are formed using the `kronecker` function.
2. Index k is used instead of i to avoid overriding imaginary unit i .
3. The expression `j == k` is equivalent to δ_{jk} .

Eigenmath script