1 | **Axler6.23 orthonormal def**

- A list of vectors is called *orthonormal* if each vector in the list has norm 1 and is orthogonal to all other vectors in the list
- in other words, a list $e_1, \ldots, e_m$ of vectors in V is orthonormal if

$$\langle e_j, e_k \rangle = \begin{cases} 1 & \text{if } j = k \\ 0 & \text{if } j \neq k \end{cases}$$

2 | **results**

2.1 | **Axler6.25 norm of an orthonormal linear combination**