

## 1 | diagonal matrix def

A *diagonal matrix* is a square matrix that is zero everywhere except possibly along the diagonal.

### 1.1 | results

#### 1.1.1 | every diagonal matrix is upper triangular

## 2 | diagonalizable def

An operator  $T \in \mathcal{L}(V)$  is called *diagonalizable* if the operator has a diagonal matrix with respect to some basis of  $V$ .

### 2.1 | results

#### 2.1.1 | Axler 5.41 conditions equivalent to diagonalizability