

## 1 Numpy tests

### 1.1 Array

$$\mathbf{a} = \begin{pmatrix} 100 \\ 10 \\ 20 \end{pmatrix}$$

### 1.2 Matrix

$$M = \begin{bmatrix} 2 & 3 & 4 \\ 0 & 0 & 1 \\ 0 & 0 & 2 \end{bmatrix}$$

### 1.3 Product

$$M\mathbf{a} = \begin{pmatrix} 310 \\ 20 \\ 40 \end{pmatrix}$$

### 1.4 Fraction

$$M_u = 500.0 \text{ k-ft}$$