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## 0.1 Matrix representation

## 0.1.1 Representing linear maps as matrices

We previously discs ussed morphisms on vector spaces. We can write these as matrices.

Matrices represents transformations of vector spaces

## ${\bf 0.1.2} \quad {\bf Representing\ vectors\ as\ matrices}$

We can represent vectors as row or column matrices.

$$v = \begin{bmatrix} a_1 & a_2 & \dots & a_n \end{bmatrix}$$

$$v = \begin{bmatrix} a_1 \\ a_2 \\ \dots \\ a_m \end{bmatrix}$$