

PLANE VECTORS

Why

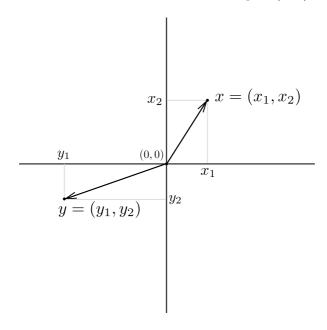
A point in the plane can be *interpreted* as a *displacement*.

Definition

A plane vector (or vector, two-dimensional vector, 2-vector) is an element of \mathbb{R}^2 . We associate a list of two numbers with a point in the plane, a location. We also associate a list of two numbers with a displacement, a change in location.

Visualization

As in plane geometry, pictures are indispensable (though they are not proofs). In the figure, indicate the vectors $x, y \in \mathbb{R}^2$ on a plane. We have also indicated the origin, (0,0), as usual.



Note on terminology

The English word "vector" is from the same Latin word "vector," meaning, literally, carrier. This sense is from the interpretation of a vector as indicating a displacement.

