



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 \mathbf{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 $x, y \in \mathbf{R}^2$ 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.

