

The Equation of a Line in the Plane

Outline

- points vs physics vectors vs math vectors
- the idea of \mathbb{R}^2
- sketching points and vectors in the plane
- vector algebra in \mathbb{R}^2
- lines in \mathbb{R}^2 as parametric objects: through the origin, and not
- sketching lines in \mathbb{R}^2
- lengths, angles, and the dot product in \mathbb{R}^2
- normal vector to a line in \mathbb{R}^2
- equation of a line, three methods: elimination, from two pts via similar triangles, from geometry of dot product
- families of parallel lines
- sketching a line from an equation
- the big theorem with duality