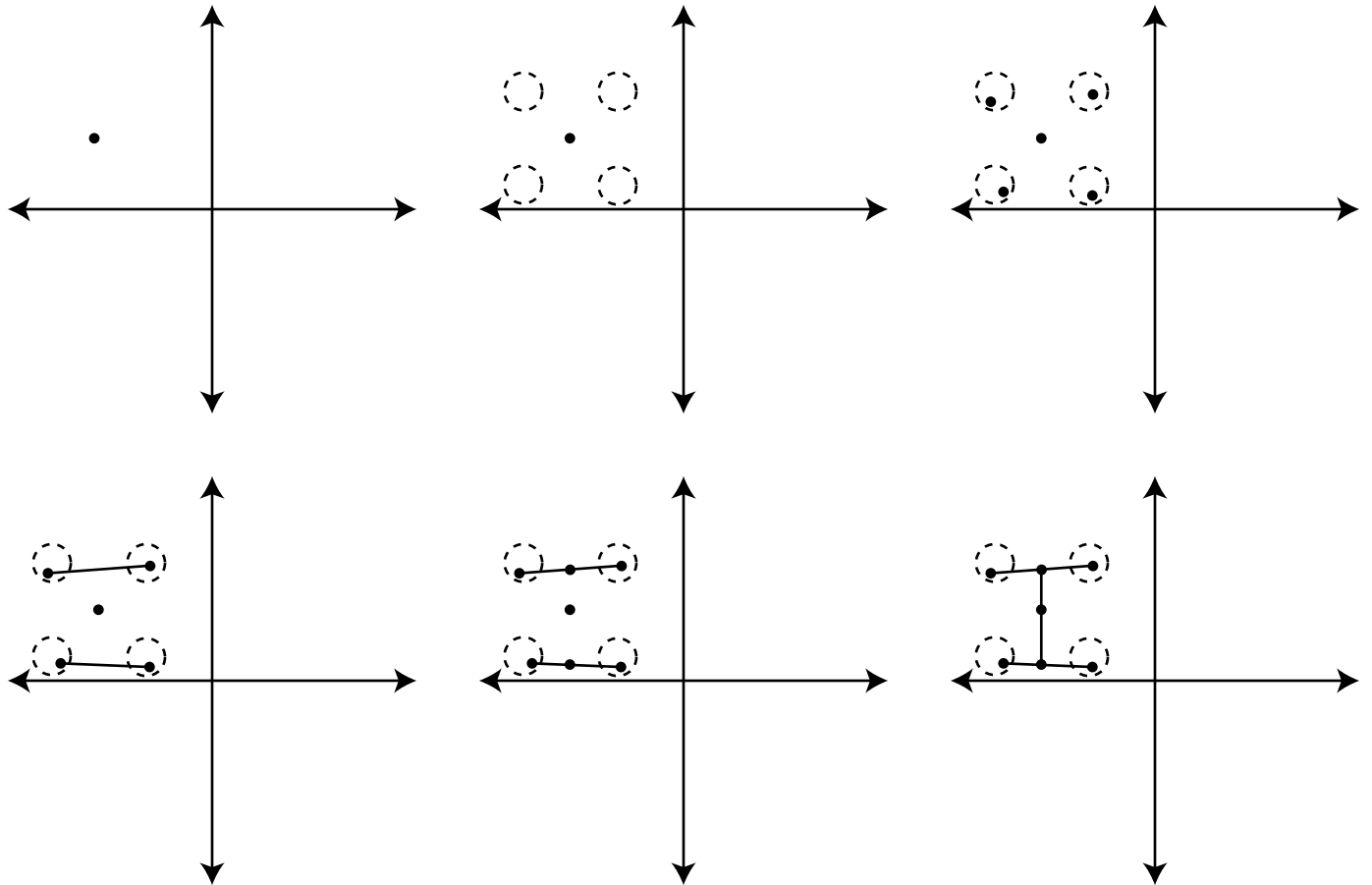


Proof Without Words

If $A \subseteq \mathbb{R}^2$ is dense and convex, then $A = \mathbb{R}^2$.

Proof:



Exercise: reason similarly for all finite dimensional \mathbb{R}^n .

Exercise: formulate a proof based on an n-simplex (triangle, tetrahedron, and so forth) instead of an n-cube.

Challenge: what happens in infinite dimensions, say in ℓ^2 ?

-Jack S. Calcut
11/29/2007
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