

Affine Sets and Linear Equations

Main result

Proposition 1. $M \subset \mathbb{R}^n$ is affine if and only if there exists $b \in \mathbb{R}^m$ and $B \in \mathbb{R}^{m \times n}$ such that

$$M = \{ x \in \mathbf{R}^n \mid Bx = b \}.$$

