

## $\begin{tabular}{l} \Leftrightarrow$ Affine Sets and Linear Equations

**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

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

