

TEOREMA:  $f: \mathbb{R}^m \rightarrow \mathbb{R}^m$  ISOMETRIA

$\Rightarrow \exists! A \in O(m), v \in \mathbb{R}^m$  T.q.

$$f = T_v \circ L_A$$

$\uparrow$

$$\text{Iso}(\mathbb{R}^m) = \mathbb{R}^m \times O(m) \leftarrow$$

$\nearrow$  COMPOSIÇÃO      COMO CONJUNTO

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$G_1, G_2$  GRUPOS

$$G_1 \times G_2 = \{ (g_1, g_2) : g_1 \in G_1, g_2 \in G_2 \}$$

$$(g_1, g_2) \cdot (g'_1, g'_2) = (g_1 g'_1, g_2 g'_2)$$

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$$f \simeq (v, A) \quad f \circ f'(p) =$$

$$f' \simeq (v', A') \quad \underbrace{T_v \circ L_A}_{f} \circ \underbrace{T_{v'} \circ L_{A'}}_{f'}(p)$$

$$= A(A'p + v') + v = (AA')p + Av' + v$$