



**Definition**

Let  $K \subset \mathbf{R}^n$  be a proper cone. Define a relation  $\preceq_K \subset \mathbf{R}^n \times \mathbf{R}^n$  by  $(x, y) \in \preceq_K$  if  $y - x \in K$ . We call  $\preceq_K$  the *cone-ordering* (or *generalized inequality*) of  $K$ .



