Definition 14.24. [17Y] *Let $C \subset \mathbb{R}^n$ be a convex set, and $f : C \to \mathbb{R}$ a function. f is* convex *if*

$$\forall t \in [0,1],\ \ \forall x, y \in C,\ \ f\big(tx + (1-t)y\big) \le t f(x) + (1-t) f(y)\ .$$

f is strictly convex *if also*

$$\forall t \in (0,1),\ \ \forall x, y \in C, x \neq y,\ \ f\big(tx + (1-t)y\big) < t f(x) + (1-t) f(y)\ .$$