Part 1. Stochastic learning

Exercise 1. ($\star$)Let $f : \mathbb{R}^d \to \mathbb{R}$ such that $f(w) = g(<w, x> +y)$ or some $x \in \mathbb{R}^d$, $y \in \mathbb{R}$. Show that: If g is convex function then f is convex function.