Exercises

E15.c.2 [18F] Show that $f(x)$ is convex if and only if the map $R(x,y) = \frac{f(x)-f(y)}{x-y}$ is monotonically weakly increasing in x. [a] Moreover, f is strictly convex if and only if R is strictly increasing.

Solution 1. *[18G]*

[a] Note that $R(x,y)$ is symmetrical.