

## Exercises

E23.9 [1R1] Let  $\Theta : \mathbb{R} \rightarrow \mathbb{R}$  be a continuous function, Describe all solutions  $f : \mathbb{R} \rightarrow \mathbb{R}$  that solve

$$\forall x \neq 0, f'(x) = \Theta\left(\frac{f(x)}{x}\right)$$

(Hint: change variables  $f(x) = xh(x)$  and find and solve a differential equation for  $h(x)$ .)

**Solution 1.** [1R2]

[ [1R3] ]