

Exercice 4 du TD1

1. $\exists x_0 \in I, f(x_0) = 0$

2. $\forall x \in I, f(x) = 0$

3. Non $(\exists C \in \mathbb{R}, \forall x \in I, f(x) = C)$

$\Leftrightarrow \forall C \in \mathbb{R}, \exists x_c \in I, f(x_c) \neq C$

4. $\forall (x, y) \in I^2, (f(x) \neq f(y) \Rightarrow x \neq y)$

$\Leftrightarrow \forall (x, y) \in I^2, (x = y \Rightarrow f(x) = f(y))$

5. $\exists x_0 \in I, \forall x \in I, f(x) \geq f(x_0)$

6. $\forall A \in \mathbb{R}, \exists x_A \in I, f(x_A) \geq A$

7. $\forall (x, y) \in I^2, (f(x) = f(y) = 0 \Rightarrow x = y)$