

# Recapitulation: solve any linear equation in $\mathbb{R}$

Assume that  $(a, b) \in \mathbb{R}^2$  are any real numbers.

Then the solutions in  $\mathbb{R}$  of the linear equation  $ax = b$  in  $x \in \mathbb{R}$  are the following:

1. If  $a \neq 0$ , then the solution is:  $x = \frac{b}{a}$ .
2. If  $a = 0$  and  $b \neq 0$ , then the equation has no solution in  $\mathbb{R}$ .
3. And if  $a = b = 0$ , then the solutions of the equation are all the  $x \in \mathbb{R}$ .