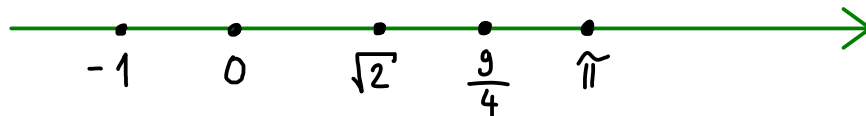


Start Learning Complex Numbers – Part 1

Number line $\mathbb{R}$



- field $+$ $\cdot$
- ordering $\leq$ (Archimedean, compatible with $+$ and $\cdot$, ...)
- complete

One can solve a lot of equations:

$$X + 5 = 1, \quad X + X = -1$$

$$X \cdot 5 = 1$$

$$X^2 = 2$$

We cannot solve: $\underbrace{X^2}_{X \cdot X} = -1$ (because $X^2 \geq 0$ for all $x \in \mathbb{R}$ and $-1 < 0$)

