

## 6 Real line

[09X]

We will indicate in the following with  $\mathbb{R}$  the real line, and with  $\overline{\mathbb{R}} = \mathbb{R} \cup \{+\infty, -\infty\}$  its extension.<sup>46</sup>

We will use *intervals* (see definition in [07C]).

**Remark 6.1.** [2DJ]

### Exercises

E6.2 [09Y]

E6.3 [20V]

E6.4 [20W]

E6.5 [20X]

E6.6 [0B0]

**QuasiEsercizio 20.** [29F]

### 6.1 Neighbourhoods

[29H]

### 6.2 Frequently, eventually

[29K]

### 6.3 Supremum and infimum

[29M]

### 6.4 Limits

[29N]

### 6.5 Upper and lower limits

[29P]

### 6.6 Approximation of irrational numbers

[29Q]

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<sup>46</sup>The topological structure of  $\overline{\mathbb{R}}$  will be discussed further in [0HP].