

# Richard Dedekind

German mathematician



Julius Wilhelm Richard Dedekind was a German mathematician who made important contributions to abstract algebra, axiomatic foundation for the natural numbers, algebraic number theory and the definition of the real numbers. [Wikipedia](#)

**Born:** 6 October 1831, [Braunschweig, Germany](#)

**Died:** 12 February 1916, [Braunschweig, Germany](#)

**Education:** [University of Göttingen](#)

**Parents:** [Julius Levin Ulrich Dedekind](#), [Caroline Marie Henriette Emperius](#)

**Fields:** [Mathematics](#), [Philosophy of mathematics](#)

## Numbers - notations

$\mathbb{N}$  - set of natural numbers  $\{0, 1, 2, \dots\}$

$\mathbb{Z}$  - set of integers  $\{\dots, -2, -1, 0, 1, 2, \dots\}$

$\mathbb{Q}$  - set of rational numbers  $\{\frac{p}{q} \mid p, q \in \mathbb{Z}, q \neq 0\}$

$\mathbb{R}$  - set of real numbers - generally defined by a 'Dedekind cut' of the rational numbers on the real line

$\mathbb{C}$  - set of complex numbers  $\{a + bi \mid a, b \in \mathbb{R}, i^2 = -1\}$