German mathematician who made contributions to number theory. In 1872 he introduced the Dedekind cut (which divides a line of infinite length representing all real numbers) to define irrational numbers in terms of pairs of sequences of rational numbers.

Dedekind was born in Brunswick and studied at Göttingen. He was professor at the Technische Hochschule in Brunswick 1862–94.

In 1858 he succeeded in producing a purely arithmetic definition of continuity and an exact formulation of the concept of the irrational number. This led to the Dedekind cut, explained in his book Stetigkeit und irrationale Zahlen (1872). In Was sind und was sollen die Zahlen? (1888) he devised axioms that formally and exactly represented the logical concept of whole numbers. The factorization of algebraic numbers and the theory of the ideal, which he described 1879–94, was fundamental to modern algebra; and he introduced the concept of dual groups, a precursor of lattice theory.