This is in answer to Settembrini's blog of March 10, 2010 (#237).

In contrast with the fact that every rational number can be expressed as the ratio of two integers, my statement in my blog MAIMING THE MIND (#230): "the real numbers are constructed from the rational numbers" does not mean that any given irrational number can be expressed in terms of two rational numbers or, for that matter, finitely many rational numbers. As a matter of fact, it will take infinitely many. What is true is that every real number can be determined as the limit of a sequence of rational numbers. This construction of the real number system from the rational is known as the method of Cauchy sequences named after Augustin Louis Cauchy (1798-1857), who used it first.

My blog MAIMING THE MIND has a gap, the details of the construction of irrational numbers in terms of rational numbers, left for the sake of simplicity. I congratulate Settembrini for picking it up. I fill in the gap in my blog FROM THE RATIONAL TO THE IRRATIONAL that can be found in my website:
www.professorfekete.com/math/opinionator