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Ranjan Roy* (royr@beloit.edu). *Newton's Work in Infinite Series.*

In the winter of 1664–65, Newton conjectured the infinite power series expansion of a binomial raised to a fractional power. Within two to three years, he verified a few cases of this formula by multiplication of series. By 1669, he had developed the theory of infinite power series by viewing these series as analogs of real numbers expressed as decimals. This analogy helped him to discover the implicit function theorem. (Received July 23, 2015)