In mathematics, 0.999... (also written as 0.9, in repeating decimal notation) denotes the repeating decimal consisting of an unending sequence of 9s after the decimal point. This repeating decimal represents the smallest number no less than every decimal number in the sequence (0.9, 0.99, 0.999, ...).[1] This number is equal to 1. In other words, "0.999..." and "1" represent the same number. There are many ways of showing this equality, from intuitive arguments to mathematically rigorous proofs. The technique used depends on the target audience, background assumptions, historical context, and preferred development of the real numbers, the system within which 0.999... is commonly defined. (In other systems, 0.999... can have the same meaning, a different definition, or be undefined.) More generally, every nonzero terminating decimal has two equal representations (for example, 8.32 and 8.31999...), which is a property of all base representations. The utilitarian preference for the terminating decimal representation contributes to the misconception that it is the only representation. For this and other reasons—such as rigorous proofs relying on non-elementary techniques, properties, or disciplines—some people can find the equality sufficiently counterintuitive that they question or reject it. This has been the subject of several studies in mathematics education.