

The Really Really Big Urn

History and provenance

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The Ross–Littlewood paradox

The numbered-pebble urn belongs to the family generally called the *Ross–Littlewood paradox*. Peter Lynch’s 2020 exposition discusses the paradox and its connection to Littlewood [1]. John Norton’s University of Pittsburgh material places urn examples in the broader study of *supertasks*: idealized processes involving infinitely many operations [2].

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Here removals are deterministic: pebble 1, then pebble 2, and so on. Other versions remove a randomly chosen pebble, or place the operations at times that approach a finite deadline. Those additions introduce different questions and should not be silently imported into this statement.

The central issue is whether one takes the limit of the collections or the limit of their sizes. The two operations need not commute.

The established name identifies the puzzle family. I did not independently establish the first printed occurrence of this exact ten-in/one-out, separately numbered-step wording.

Sources

[1] Peter Lynch, The Ross–Littlewood Paradox, ThatsMaths (April 9, 2020).

<https://thatsmaths.com/2020/04/09/the-ross-littlewood-paradox/>

[2] John D. Norton, Paradoxes of the Infinite: Supertasks and the Urn, University of Pittsburgh course chapter.

https://sites.pitt.edu/~jdnorton/teaching/paradox/chapters/supertask_urn/supertask_urn.html

Sources checked September 7, 2026. A documented appearance is not necessarily the earliest appearance.