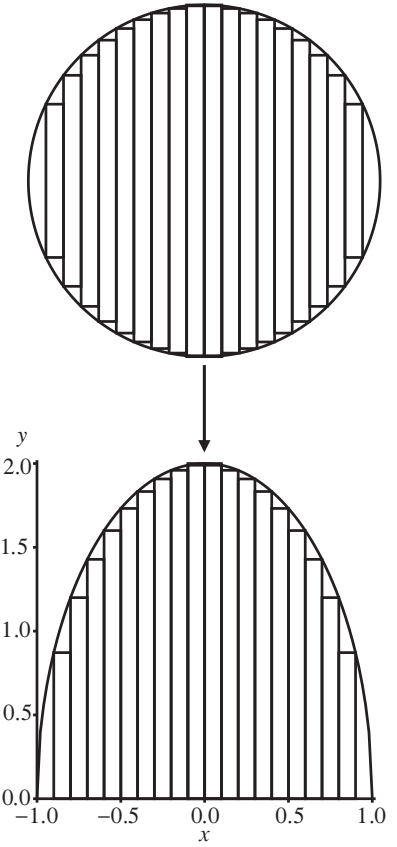
Feedback

Colin Foster writes: In [1], Paul Belcher misunderstands the 'shearing' transformation intended in my Note [2]. I acknowledge that 'shearing' was not quite the right term to describe what is taking place. In the transformation described in [2], nothing gets 'stretched'. The disc is divided into a large number of narrow rectangular strips, which are slid vertically by varying amounts until their lower ends are aligned, to create the half-ellipse, as depicted in the figure below. There is no change in total area, and the given integral follows.



Reference

1. Paul Belcher, Feedback, *Math. Gaz.* **109** (March 2025) p. 167.
2. Colin Foster, Teaching Note $\int_0^{\pi} \sin^2\theta\, d\theta$ from a shear-like transformation of a circle, *Math. Gaz.* **108** (November 2024) pp. 541-542.

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