

Pi is Irrational: Without Words

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Abstract

A Venn diagram shows the irrationality of π .

Background

All lower case letters are natural numbers.

If an arc length is p/q , then the slope of the radius at the terminal point of this arc can't be x/q , a defined slope, if $p/q = \pi/2$. This is true for all q , so $\pi/2$ must be irrational.

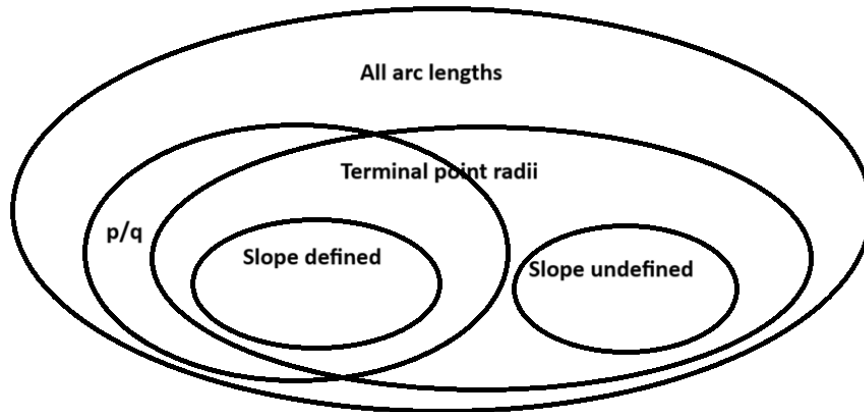


Figure 1: All rational radii slopes are contained in the first quadrant.

References

- [1] T. W. Jones, A Geometric Proof of Pi's Irrationality, available at <https://vixra.org/abs/2603.0057>.