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**Prospective teachers' understanding of the constant  $\pi$  and their knowledge of how to prove its constant nature through the concept of linearity.**

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Summary: When taught the precise definition of  $\pi$ , students may be simply asked to memorize its approximate value without developing a rigorous understanding of the underlying reason of why it is a constant. Measuring the circumferences and diameters of various circles and calculating their ratios might just represent an attempt to verify that  $\pi$  has an approximate value of 3.14, and will not necessarily result in an adequate understanding about the constant nor formally proves that it is a constant. In this study, we aim to investigate prospective teachers' conceptual understanding of  $\pi$ , and as a constant and whether they can provide a proof of its constant property. The findings show that prospective teachers lack a holistic understanding of the constant nature of  $\pi$ , and reveal how they teach students about this property in an inappropriate approach through a proving activity. We conclude our findings with a suggestion on how to improve the situation.

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