# REPRESENTATION OF FRACTION DIVISION — EXPERIENCE IN A TRAINING WITH TEACHERS WITH FOCUS ON THE REFERENCE UNIT

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The number of publications on division of fractions has increased and, although studies on representation of division of fractions only address the different types and frequencies of models developed by teachers, they do not analyze whether the models focus on units of reference, and few studies have examined the teachers' understanding of units of reference and representations (Lee, 2017). Thus, our research is based on the following questions: Are teachers able to represent division operations in the context of fractions? Do teachers understand the units of reference to which numbers refer in their representations?

This work focuses on the knowledge revealed and mobilized by elementary school teachers (who work with students from 7 to 14 years old) through a task developed by the authors. The sources of information were produced in an online teacher training, lasting 6 hours, in 2 days, through questionnaires, observations during the online training, notes, productions of activities and recordings.

The teachers in this study had difficulties in performing the representations of fractional divisions, especially when the divisor was fractions. The investigation points out that this is since teachers do not have a broad understanding of the concept of division, partitive, and measure; as well as a weakness in flexibility with the reference unit, as this affected the ability to incorporate their division fraction length representations; in addition to the lack of experience with this type of task. Thus, it is necessary that teachers have experience with multiple representations to develop flexibility with the reference unit that allows the connection between symbolic notation and representation.

## References

Lee, M. Y. (2017). Pre-service teachers' flexibility with referent units in solving a fraction division problem. *Educational Studies in Mathematics, 96*, 327-348.