

Understanding Students' Pre- and Post-Instructional Conceptions of Integers and the Implications for Teacher Educators

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Solve each in more than one way.

- 1) $3 - \underline{\quad} = -6$
- 2) $-5 + -1 = \underline{\quad}$
- 3) $-8 - 3 = \underline{\quad}$
- 4) $6 + \underline{\quad} = 4$
- 5) $-5 - -3 = \underline{\quad}$
- 6) $6 - -2 = \underline{\quad}$

Project Publications

- Bishop, J. P., Lamb, L. L., Philipp, R. A., Whitacre, I., & Schappelle, B. P. (in press). Using order to reason about negative numbers: The case of Violet, *Educational Studies in Mathematics*.
- Bishop, J., Lamb, L., & Philipp, R. (in press). Opportunities for algebraic reasoning in the context of integers. Wyoming Institute for the Study and Development of Mathematics Education (WISDOM^e) Chapter.
- Whitacre, I., Bishop, J. P., Philipp, R. A., Lamb, L. L., & Schappelle, B. (in press). Dollars and sense: Students' integer perspectives. *Mathematics Teaching in the Middle School*.
- Bishop, J. P., Lamb, L.L., Philipp, R. A., Whitacre, I., Schappelle, B. P., & Lewis, M. (2014). Obstacles and affordances for integer reasoning: An analysis of children's thinking and the history of mathematics. *Journal for Research in Mathematics Education*, 1 (45), 19–61.
- Lamb, L., Bishop, J., Philipp, R., Whitacre, I., Stephan, M., Bofferding, L., Lewis, J., Brickwedde, J., Bagley, S., & Schappelle, B. (2013). Building on the emerging knowledge base for teaching and learning in relation to integers. *Proceedings of the 35th annual conference of the North American Chapter of the International Group for the Psychology of Mathematics Education (PME-NA 2013)*, Chicago, IL.
- Bishop, J. P., Lamb, L. L., & Philipp, R. A. (2013). Opportunities for algebraic reasoning in the context of integers. *Proceedings of the Epistemic Algebraic Student Conference*, University of Georgia, Athens, GA.
- Lamb, L. L., Bishop, J. P., Philipp, R. A., Schappelle, B. P., Whitacre, I., & Lewis, M. (2012). Developing Symbol sense for the minus sign. *Mathematics Teaching in the Middle School*, 18 (1), 5–9.
- Lamb, L. L., Bishop, J. P., Philipp, R. A., Schappelle, B. P., Whitacre, I., & Lewis, M. (2012). High school students' conceptions of the minus sign. *Mathematics Teaching*, (227), 40–44.
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- Bishop, J. P., Lamb, L. L., Philipp, R. A., Schappelle, B. P., & Whitacre, I. (2011). First graders outwit a famous mathematician. *Teaching Children Mathematics*, 17, 350–358.
- Pierson, J., Lamb, L., Philipp, R., Schappelle, B., & Whitacre, I. (2010). A developing framework for children's reasoning about integers. In P. Brosnan, D. Erchick, & L. Flevares (Eds.), *Proceedings of the 32nd Annual Conference of the North American Chapter of the International Group for the Psychology of Mathematics Education* (pp. 695–702). Columbus, OH: The Ohio State University. Downloaded from <http://pmena.org/2010/>

Project Z: Mapping Developmental Trajectories of Students' Conceptions of Integers

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