ZMATH 2006c.01541

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Effects of classroom instruction on student performance on, and understanding of, linear equations and linear inequalities.

Math. Think. Learn. 8, No. 2, 113-147 (2006).

Two-hundred and thirty-one students in 6 Grade 9 classes in 2 secondary schools in Thailand attempted 54 pencil-and-paper tasks related to linear equations and linear inequalities immediately before and after they participated in 13 lessons on those topics. Students' written responses, and transcripts of pre- and postteaching interviews with 18 interviewees (a high-performer, a middle-performer, and a low-performer, from each of the 6 classes), were analyzed, the aim being to identify changes in student understanding. At the postteaching stage, students improved their performance and had a better understanding of associated concepts than they had at the preteaching stage. However, many remained confused about the meaning of an inequality and about what solutions to an inequality represented. Six months later, students in low- and medium-stream classes performed only slightly better than they had performed at the preteaching stage. (orig.)

Classification: C70 H30 D40
doi:10.1207/s15327833mtl0802_2