

ZMATH 2012e.00216

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Language, strategy and reasoning's level of variation of secondary students. (Linguagem, estratégia e nível de raciocínio de variação dos alunos do ensino fundamental II.)

Bolema 24, No. 39, 515-536 (2011).

Summary: This study explored language, strategy and level of reasoning regarding variation with twenty-five eighth and ninth graders while they solved three tasks, using their anthropometric measures. Students' answers were categorized using content analysis and SOLO taxonomy. There was an increase in the quantity and quality of variation terms during the development of the tasks. The strategy that increased in frequency during the tasks was modal clump, an important strategy to promote intuitive notions of distribution density. Higher levels of reasoning about variation were observed, indicating that students appropriated new tools for analyzing variation. In light of the contributions observed from using dot plots and box plot for developing variation reasoning, additional activities should be developed with these tools to evaluate their effectiveness for building the interquartile range concept.

Classification: C30 K60

Keywords: non-conventional language of variation; variation's strategy; variation's reasoning levels; SOLO taxonomy