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An examination of the levels of cognitive demand required by probability tasks in middle grade mathematics textbooks.

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Summary: We analyze probability content within middle grades (6, 7, and 8) mathematics textbooks from a historical perspective. Two series, one popular and the other alternative, from four recent eras of mathematics education (New Math, Back to Basics, Problem Solving, and Standards) were analyzed using the Mathematical Tasks Framework (Stein, Smith, Henningsen, & Silver, 2000). Standards-era textbook series devoted significantly more attention to probability than other series; more than half of all tasks analyzed were located in Standards-era textbooks. More than 85% of tasks for six series required low levels of cognitive demand, whereas the majority of tasks in the alternative series from the Standards era required high levels of cognitive demand. Recommendations for future research are offered.

Classification: U23
Keywords: probability; curriculum; textbook content analysis; mathematical tasks; cognitive demands; middle grades mathematics