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Secondary school mathematics teachers' conceptions of proof.

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Summary: Recent reform efforts call on secondary school mathematics teachers to provide all students with rich opportunities and experiences with proof throughout the secondary school mathematics curriculum - opportunities and experiences that reflect the nature and role of proof in the discipline of mathematics. Teachers' success in responding to this call, however, depends largely on their own conceptions of proof. This study examined 16 in-service secondary school mathematics teachers' conceptions of proof. Data were gathered from a series of interviews and teachers' written responses to researcher-designed tasks focusing on proof. The results of this study suggest that teachers recognize the variety of role that proof plays in mathematics; noticeably absent, however, was a view of proof as a tool for learning mathematics. The results also suggest that many of the teachers hold limited views of the nature of proof in mathematics and demonstrated inadequate understanding of what constitutes proof.

Classification: E59

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