Arias de Reyna, J.; Clark, David; Elkies, Noam D.
A modern solution to the Gion shrine problem. (English) Zbl 1436.51013
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Summary: We give a new solution to the famous Gion shrine geometry problem from eighteenth-century Japan. Like the classical Japanese solution, ours is given in the form of a degree-ten equation. However, our polynomial has the advantage of being much easier to write down. We also provide some additional analysis, including a discussion of existence and uniqueness. Finally, we prove that the Gion shrine problem has no rational solutions.

MSC:
51M04 Elementary problems in Euclidean geometries
01A27 History of Japanese mathematics
11D41 Higher degree equations; Fermat’s equation

Full Text: DOI arXiv

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