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Sunshine in DQME?

Henn, Hans-Wolfgang (ed.) et al., Growing mathematics. Second annual publication of the Comenius-Network Developing Quality in Mathematics Educations II – DQME II. Dortmund: TU Dortmund (ISBN 978-3-921823-48-4/pbk). 8-16 (2009).

Summary: The movement of the sun through the day is a reality that all of us experience. This paper describes a task for pupils and students that can be readily adapted to different localities and which models the changing shape of shadows cast by the sun and the protection from the sun afforded by simple canopies. The method described uses DERIVE; a complete worksheet is given as are accompanying notes for teachers.

Classification: M53 M54 G53 G54 R23 R24

Keywords: mathematical models; astronomy; transformation geometry; matrices