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**A study of variations in daytime duration in the city of Gothenburg.**

Henn, Hans-Wolfgang (ed.) et al., Harvesting mathematics. Third annual publication of the Comenius-Network 'Developing Quality in Mathematics Education II' - DQME II. Dortmund: Technische Universität Dortmund (ISBN 978-3-921823-52-1). 119-128 (2010).

Summary: Mathematical modeling is a fascinating part of mathematics. To describe everyday phenomena with mathematical language is a challenge to mathematicians around the world and different problems can be difficult to solve, depending on the issue. To gain insight into this part of mathematics is usually appreciated by school students who get a much better sense of importance of mathematics. The authors report on a project to create a mathematical model describing the variations in the duration of daytime during one year in Gothenburg, Sweden.

*Classification:* M54 G64 I24

*Keywords:* trigonometric functions; regression; weather; mathematical models; meteorology