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Figures in a grid – a problem field with different tasks for different grades.

Fritzlar, Torsten (ed.) et al., Problem solving in mathematics education. Proceedings of the 2015 joint 17th conference of ProMath and the 2nd GDM working group on problem solving, University of Halle-Wittenberg, Germany, September 3–5, 2015. Münster: WTM-Verlag (ISBN 978-3-95987-012-2/pbk; 978-3-95987-013-9/ebook). *Ars Inveniendi et Dejudicandi* 6, 93-101 (2016).

Summary: Working within a problem field happens far too little. For stimulating the discussion one example will be described here with the problem field of figures in a grid in which one can find a lot of interesting problems. Already in primary school pupils can make several investigations by using a board with pins but also in secondary school from time to time one can treat a problem concerning only grid points. Here on one hand we will focus on searching for different triangles in a 3×3 -grid and on the other hand we will discuss the slopes of union lines of two points in an indefinite grid as well as angle measures between such two lines.

Classification: D50 G40

Keywords: problem solving; figures in a grid