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Understanding multiplication: is a tree diagram better than a tangram? (Porozumenie pravidla súčinu: je lepší stromový diagram alebo tangram?)

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Summary: In teaching mathematics, we encounter visual models in taking new curriculum frequently. In our paper, we focus on the multiplication rule in probability using two visual models: tree diagram and tangram. First, we introduce the topic and analyse the occurrence of visual models in selected textbooks of mathematics for high schools. The main part of the paper is devoted to the analysis of the percentage of correct solutions of probability problems using visual models. According to the visual model, we analyse two worksheet tasks. Regarding to the multiplication rule in probability, we discuss pupil's solutions of the "tree diagram" worksheet firstly and of the "tangram" worksheet secondly. Our analysis shows that pupils achieve better learning outcomes when they worked with the visual model "tree diagram".

Classification: K53 U63