Mathematical Games in Learning and Teaching

Keywords
Games, video games, computer games, engagement, motivation, programming

Definition
Literature examining the contribution of mathematical games in the learning and teaching of mathematics.

Characteristics
Piaget, Bruner and Dienes suggest that games have a very important part to play in the learning of mathematics (Ernest 1986). In the last four decades, games have been proposed by a number of researchers as a potential learning tool in the mathematics classroom and there are quite a few researchers who make claims about their efficacy in the learning and teaching of mathematics (e.g., Ernest 1986; Gee 2007; Kafai 1995). Some authors take a step further; Pepert (1980) was among the first who suggested that students could learn mathematics effectively not only by playing (video) games, but also by designing their own computer games, using for instance authoring programming tools like Scratch and ToonTalk (Kafai 1995; Mousoulides ...