Universität zu Köln
Mathematisch-Naturwissenschaftliche Fakultät
Institut für Mathematikdidaktik

KOLLOQIUMSVORTRAG

im Rahmen eines ZOOM-Meetings

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BOREL – A GAME ABOUT PROBABILITY

15. DEZEMBER 2020, 16 UHR S.T.

ZOOM-MEETING BEITRETEN:

https://uni-koeln.zoom.us/j/98552031682?pwd=aGMxaFdaZGVmR1diVHdPM1E5SU9aZz09

MEETING-ID: 985 5203 1682
PASSWORT: imd-koll-g

ABSTRACT

In this talk, I will demonstrate a game called Borel (https://www.playborel.com/). The game consists of 180 cards with statements like "Roll four 6-sided dice. Will the sum of the results be at least 15?". Every player gets cards that say "Yes" or "No", and cards that say $100, $300 or $800. You select the yes or the no card and one of the money cards, based on whether you think the event is likely to occur or not, and how strong your belief is. Then everybody reveals their bets simultaneously, you conduct the experiment, and the bets are settled. The cards contain statements about rolling dice (with 6, 10, 20 and 30 sides), flipping coins, drawing coloured balls from pouches and certain symbol cards and come with the required items for performing the experiments.

I have used the game in my classes for pre-service teachers and in workshops for teachers and students in both lower and upper secondary schools. I am often cynical about educational games. I feel that they often are neither educational nor games. But Borel is different. First of all, it is fun! If works very well with teams of up to four people and generates lively discussions. It has a great mix of skill and luck. If you are good at probability, you will obviously have an advantage, but maybe the dice roll against you?

Secondly, it is very educational. Most of the cards in the game are actually quite tricky, and contains questions like "Start flipping the coin. Stop when one of the two sequences [Heads – Heads] or [Heads – Tails] appears. Will the sequence [Heads - Heads] appear first?" One of the goals of the game is to challenge our perception of randomness. However, you can easily make your own cards, based on whatever topics in probability your students have covered, and just use the framework for the game.

You can all just make your own betting slips, and we can play some rounds of the game. I will use both some original cards, and some customized cards made by my students and me. I will also discuss the mathematics behind some of the cards, to give an idea of what knowledge is required. I look forward to having a lot of educational fun with you!