CALCULATION OF PROBABILITY IN TAROK WHEN ENTERING WITH THE KING

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1. Introduction

Tarok is a game, playedwith 54 cards – taroks, andthefour standard suitsofspades, clubs, diamondsandhearts. It can be playedby 3 or 4 players. Thewinner is the one whocollectsthe most points in 12/16 roundsandhasinitiallyannouncedthat he willleadthe game. Enteringwiththeking is anindicatorofdistinctionofshowingaffiliation to the home town in Bela krajina. Such a movecanhappen in 30 % ofthegames (having a king, but not necessarilyleadingthe game). Thegoal is thatthekingcollectsthecards (smaller), thrownbyotherplayers. Thismeansthatalltheotherplayershave to throwanycardfromthefour standard suits (spade, club, diamond, heart) and not thetarok. In theresearch I did a research on whathappensiftheroundbeginswiththeking. Whencalculatingprobability, I helpedmyselfwiththelayoutofthecardsof one coloramongtheplayers.

2. Methods

Theresearch began bycollecting data aboutdealingthecards in tarokwiththreeplayers. It is assumedthattheplayerwhobegins, alreadyhas a king. 50 examples (more examples, more accurateresults) ofsharing a certaincoloramongallplayers (Table 1) werecaptured. The ratio betweenthenumberofresultswiththedesiredcombination (Table 1) andthenumberofallsuccessfuldivisionswasobserved (176 in oursample).

3. Results

According to thecollected data, theprobabilityofwinningwhenenteringwiththekingwasdetermined.
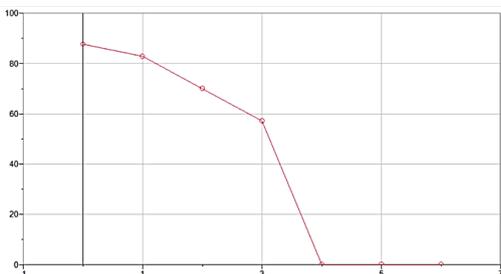
Picture 1:

Probability in relation to numberofcardsamongthefoursuites in thehand_01.

It happens to depend on thenumberofcardsofthe same color in the talon as theking (Figure 1, thefirstsixcards on thesplitcup, which are excludedfromthe game) andtheprobabilityofvictorywiththeking, whichdepends on thenumberofcardsofthe same color as theking in thehandoftheplayer.There is no thiskindofthisinformationduringtheplay, which, depending on thenumberofcards, in probabilities, canlead to

deviations. Withfouror more cards in the talon, probability is 0 %, because in anycase, one oftheplayersdoes not have a singlecolorofthekingandthe game does not turn out.
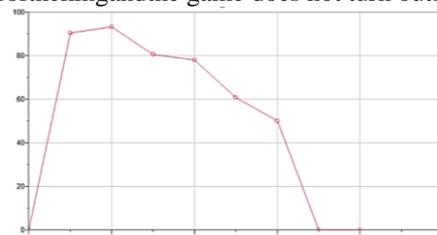
Picture 2:

Probability in relation to number of cards among the four suites in the hand_02.

If we take that at 75 % probability and more (if it is enough for us, if we keep the king in at least in ¾ of the games), based on the results in the graph, it is worth entering the game with the king, this is when we have up to four cards in hand (the king must be among them) of the same color. That means that in 87.5 % of the games it is worth entering with the king.

4. Conclusion

In general, it is worthenteringthe game withtheking. It willturn out good more oftenthan it willfallthrough. Based on thesepercentages (listedunder 1), thosewhowould like to explorethisprobability more precise, canrely. Ofcourse, enteringwiththeking is not a limitation, wecouldalsocalculatetheprobabilityforanyothercard. Wecouldalso enter duringor at theendofthe game.

5. Literature
[1] Gregor Pavlič, DušanKavka, Marina Rugelj, JanezŠparovec: LINEA NOVA, učbenikzamatematikoza 1. letnikgimnazij, Ljubljana 2011, Modrijanzaložba, d.o.o.

[2]Simon Jerič - TeorijaTaroka (2008)