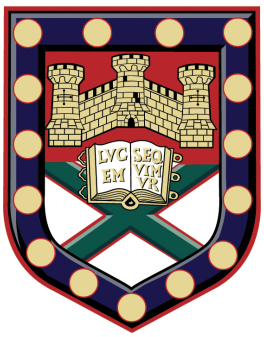

University of Exeter

College of Engineering, Mathematics and Physical Sciences

ECM3735 - Group 8

Finding the optimal strategy for the dice game 'Pig'

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Abstract

Insert abstract here

Contents

1 Introduction

Suppose I have 2 stratergies A and B. Consider that it is A's turn and we are in postion (i, j, k) where i is A's banked points, j is B's banked points, and k is A's points so far on this turn. Let P_{ijk} denote probability of A winnig from that position and Q_{ijk} denote probability of B winning from the equivalent position (where i then represents B's banked points ect). Then,

$$p_{ijk} = \frac{1}{6}(1 - Q_{ij0}) + \frac{1}{6}\sum_{r=2}^{6} P_{ijk+r} \tag{1}$$

if A rolls and

$$p_{ijk} = 1 - Q_{jik} \tag{2}$$

if A holds.

1.1 Aims and Objectives

josh

1.2 History of Pig

Liam

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1.2.2 Nellers Work

1.3 Optimal Stratergy

chris C

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chris N

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Mia

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Chris C

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2.3 Pig

anthony and rhodri

2.3.1 Expansion from Piglet

I DID SOMETHING IOMPORTANT HERE