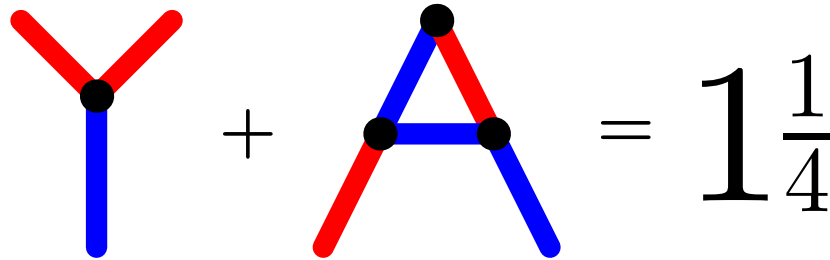


Number Theory and Combinatorics Seminar



The diagram shows a red Y-shape on the left, followed by a plus sign, then a blue and red A-shape, followed by an equals sign, and finally the fraction 1 and 1/4. The Y-shape has a blue stem and two red arms. The A-shape has a blue horizontal bar and two red arms, with a black dot at each vertex.

Wednesday, December 7, 2011

Room: E575

Time: 12:00 – 12:50pm

Speaker: Dave Morris (University of Lethbridge)

Title: How to make infinitely large numbers from two-player games

Abstract: We will talk about certain strategy games, in which the moves alternate between two players. Chess, checkers, and Go are some of the games we could discuss, but, to keep things simple, we will stick to easier examples. John H. Conway discovered that analyzing who will win from a given starting position has some very interesting consequences. In particular, we will see how to add two games (or subtract them, or multiply them), and we will encounter numbers that are infinitely large. No advanced mathematical training will be needed to understand most of this talk, but it would be helpful to have heard of “Dedekind cuts”.

The main talk will be preceded by a short explanation of “Zero-Knowledge Proofs.” These allow you to convince someone you know how to prove a theorem, without giving them any information at all about the proof (except how long it is).

EVERYONE IS WELCOME!

Visit the seminar page at <http://www.cs.uleth.ca/~nathanng/ntcoseminar.html>