

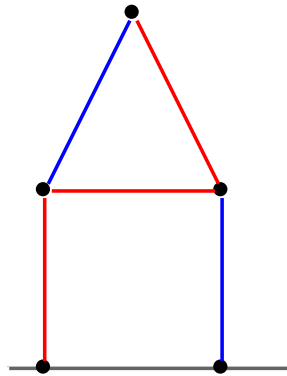
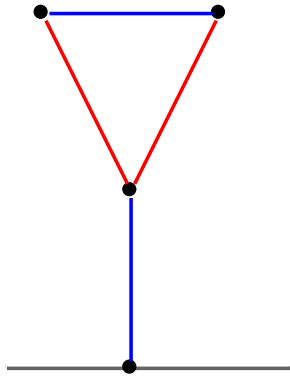
Math576 Combinatorial Game Theory

Homework 1

due Friday, Jan. 22, 2010

1. Draw a red-blue Hackenbush game with game value $1\frac{1}{4}$.
2. State the simplicity rule. Use it to find the following game values:

(a) $\{1 \mid 3\frac{1}{2}\}$ (b) $\{-2, -1 \mid -\frac{1}{4}\}$ (c) $\{0 \mid \frac{3}{4}, 2\}$ (d) $\{-1, 0, 1 \mid 3\frac{1}{2}, 4\}$
3. Find the values of the following Hackenbush games.



4. Find the value of the following ski-jump game.

	L			
		R		
				L

5. Find the value of the following Toad-and-Frog game. If Left starts first, what is his first best move? (Left moves Toads (T) and Right moves Frogs (F).)

T		F	
	T	F	
	F	T	