he wrote an algorithm that calculates the winning probabilities in the alliance game
this algorithm will also allow us to prove what we observe in the simulations

we start from all players as singletons

then they form alliances

the larger alliance wins over the smaller one

if two alliances have the same size
the one with the highest ranked player wins

when the number of players is odd then 1 loses often

i am so happy that mike likes this problem so much
he discusses it with the greatest mathematicians
it is totally amazing to work with him

the three of us must get together when you visit next!

On Sep 9, 2012, at 11:56 AM, Jeffrey Epstein wrote:

what dos this represent

On Sun, Sep 9, 2012 at 7:46 AM, Nowak, Martin <██████████████████> wrote:

the project with mike is going well!!!

Begin forwarded message:

From: Michael Hopkins <██████████████████>
Date: August 30, 2012 9:46:46 PM EDT
To: "Nowak, Martin" <████████@████████>
Subject: harmonic function, n=9, decimal version

e[e[1, x, x, x], e[x, x, x, x, x]] -> 0.
e[e[x, x, x, x], e[1, x, x, x, x]] -> 1.

e[e[1], e[x, x, x, x], e[x, x, x, x]] -> 0.259259259259259259924
e[e[x], e[1, x, x, x], e[x, x, x, x]] -> 0.
e[e[1, x], e[x, x, x, x], e[x, x, x, x]] -> 0.07407407407407407
e[e[x, x], e[1, x, x, x], e[x, x, x, x]] -> 0.037037037037037035
e[e[x, x], e[x, x, x, x], e[1, x, x, x]] -> 0.

e[e[1], e[x], e[x, x, x], e[x, x, x, x]] -> 0.079942618675013304
e[e[1], e[x, x], e[x, x], e[x, x, x, x]] -> 0.06311945748565467
e[e[x], e[x], e[1, x, x, x], e[x, x, x, x]] -> 0.03312467396974439
e[e[x], e[x], e[x, x, x, x], e[1, x, x, x]] -> 0.
e[e[x], e[1, x], e[x, x], e[x, x, x, x]] -> 0.04903495044340115
e[e[x], e[x, x], e[x, x], e[1, x, x, x]] -> 0.

e[e[1, x, x], e[x, x, x], e[x, x, x]] -> 0.03703703703703704

e[e[1], e[x, x], e[x, x, x], e[x, x, x]] -> 0.048751769878530436
e[e[x], e[1, x], e[x, x, x], e[x, x, x]] -> 0.041769878530441916
e[e[x], e[x, x], e[1, x, x], e[x, x, x]] -> 0.03468961919666145
e[e[1, x], e[x, x], e[x, x], e[x, x, x]] -> 0.039393397742156644
e[e[x, x], e[x, x], e[x, x], e[1, x, x]] -> 0.034689619196661456

e[e[1], e[x], e[x], e[x, x, x], e[x, x, x]] -> 0.045247880994745755
e[e[1], e[x], e[x, x], e[x, x], e[x, x, x]] -> 0.0422351092858521
e[e[x], e[x], e[x], e[1, x, x], e[x, x, x]] -> 0.034063641105894625
e[e[x], e[x], e[1, x], e[x, x], e[x, x, x]] -> 0.038169314210988924
e[e[x], e[x], e[x, x], e[x, x], e[1, x, x]] -> 0.0343766630151278044

e[e[1], e[x], e[x], e[x], e[x, x], e[x, x, x]] -> 0.04068614541360055
e[e[x], e[x], e[x], e[x], e[1, x], e[x, x, x]] -> 0.03735886505788107
e[e[x], e[x], e[x], e[x], e[x, x], e[1, x, x]] -> 0.03425143453312468

e[e[1], e[x, x], e[x, x], e[x, x], e[x, x]] -> 0.04049636848817573
e[e[x], e[1, x], e[x, x], e[x, x], e[x, x]] -> 0.03838036304039884

e[e[1], e[x], e[x], e[x, x], e[x, x], e[x, x]] -> 0.039585444918585365
e[e[x], e[x], e[x], e[1, x], e[x, x], e[x, x]] -> 0.03793329903369269

e[e[1], e[x], e[x], e[x], e[x], e[x, x], e[x, x]] -> 0.038983460931105954
e[e[x], e[x], e[x], e[x], e[x], e[1, x], e[x, x]] -> 0.03774182104175548

e[e[1], e[x], e[x], e[x], e[x], e[x], e[x], e[x, x]] -> 0.038628706677005825
e[e[x], e[x], e[x], e[x], e[x], e[x], e[x], e[1, x]] -> 0.03774182104175548

e[e[1], e[x], e[x], e[x], e[x], e[x], e[x], e[x], e[x]] -> 0.038628706677005825

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