

Applicability of Given Heuristics

Author: Joshua Harkness

All examples given are estimations. They do not use actual probabilities.

Some functions probability will be purely estimated without any demonstration of the math behind the reasoning.

H1

$$\text{pair}(1/10 * 1/10) + \text{zeroP3}(1/20) + \text{goal}(1/10) = 1/100 + 1/20 + 1/10 = .16$$

H2

$$\text{pair}(1/10 * 1/10) + \text{goalP3}(1/5) = 1/100 + 1/5 = .21$$

It is more likely that any random number can be made from three numbers than the three numbers being forced to only equal a specific number.

H3

$$\text{zero}(1/10 * 1/10 * 1/10 * 1/10 * 1/10) + \text{pair}(1/10 * 1/10) = 1/100,000 + 1/100 = .01001$$

Use pair because the goal being the same as a number is similar to finding a pair.

H4

$$\text{pair}(1/10 * 1/10) + \text{pair}(1/10 * 1/10) = 1/100 + 1/100 = .20$$

H5

$$\text{one}(1/10 * 1/10 * 1/10 * 1/10 * 1/10) + \text{zeroP3}(1/20) + \text{oneMore}(1/50) = 1/100,000 + 1/20 + 2/100 = .07001$$

H6

$$\text{one}(1/10 * 1/10 * 1/10 * 1/10 * 1/10) + \text{one}(1/10 * 1/10 * 1/10 * 1/10 * 1/10) + \text{zeroP2}(1/40) + \text{twoMoreG}(1/100) = 1/100,000 + 1/100,000 + 25/1000 + .01 = .0352$$

H7

$$\text{pair}(1/10 * 1/10) + \text{pair}(1/10 * 1/10) + \text{twoMoreG}(1/100) = 1/100 + 1/100 + 1/100 =$$

.3

H8

$$\text{twoFrom}(1/100) + \text{zeroP2}(1/40) + \text{twoMoreG}(1/100) =$$

.027

H9

$$\text{sameAll}(1/10 * 1/10 * 1/10 * 1/10 * 1/10 * 1/10) =$$

.000001