

DEATH HAND (SOLUTION)

by Ong Kah Kien

The first step is to infer in which Round each player's Death Hand was played in, because these are fixed and easier to resolve and take them out of the equation. The table below summarizes the observations used to infer the Death Hands played by each player (using R# to indicate the Round number), with lines in bold indicating inferences of gestures played (R for Rock, P for Paper, S for Scissors, and DH for Death Hand). To help solvers, the observations used for this initial step are the first 8 given.

Used observation numbers	Inferences (made successively with additional observations used)
4	EDRIC's DH and drew with another DH.
6	CAEL and EDRIC did not play DH in R4. CAEL won EDRIC in R4.
5	HORX did not play DH in R1 or R7.
8	HORX played DH in either R3 or R5, while EDRIC played DH in either R6 or R2 respectively.
7	HORX did not play DH against BLAISE in R3 as BLAISE did not lose other than in R7, and only round with DH draw is with EDRIC in R6 or R2. So HORX played DH in R5, EDRIC (and DHAKAR) played DH in R2.
2	Remaining 5 DHs were played in R1, R3, R4, R6, and R7.
3	The remaining DHs were played by GAMONT and 4 against GAMONT.
4	GAMONT won against EDRIC in R7 by playing DH. Remaining 4 DHs were played against GAMONT in R1, R3, R4 and R6.

The next step is to make use of the more helpful/direct observations to make some starting inferences on which gestures were played by certain players, in order to help make other subsequent inferences. In particular, Observation 12 is an important general rule which dictates that players play optimally with their knowledge, and is one which will be used on a few times to help infer what gestures must have been played or available by certain players in specific rounds. The table below summarizes the observations and logical steps used to infer these entry points.

Used observation numbers	Inferences (made successively within each block with additional observations used)
10	HORX played R in R1 and R2, P in R3 and R4, and S in R6 and R7.
11	BLAISE did not play the same gesture in R2 and R3, and still had choice of any gesture in response for R2-R4.
12,7	So BLAISE was able to win R2-R4, because he could foretell his opponent's play. So BLAISE played S in R3. And BLAISE played R or P in R2 and R4.
6,13	The round (and only round) with 3 draws is R2. So GAMONT played R in R2.

Used observation numbers	Inferences (made successively within each block with additional observations used)
15	So GAMONT also played R in R1.
10,6	CAEL played P or S in R1.
18,20	Only 1 S played in R1 by EDRIC. So CAEL played P in R1.
4	In R1, EDRIC (who never won) lost to ALEKSI who played R. So DHAKAR and FERRIH drew with P.
11	In R2 and R3, ALEKSI only played S at most once. So would still have S available for R4.
12	In R4, HORX has only P and S left, so strategically, ALEKSI would have played his available S.
11	ALEKSI and FERRIH drew with P or S in R2.

The third step is to make use of Observation 12 to determine two of the plays, and make related inferences from there:

Used observation numbers	Inferences (made successively with additional observations used)
17,6	In R5, since CAEL did not draw, there is at least one P-P draw between BLAISE and FERRIH, and/or between DHAKAR and GAMONT.
11,12,7	In R5, since BLAISE still has S available and could foretell his opponent's play, he would not have played to a P-P draw with FERRIH. So in R5, BLAISE won FERRIH with either playing P, either ALEKSI or CAEL played P, EDRIC played P, and DHAKAR and GAMONT drew with P. DHAKAR only left with R which were played in R6 and R7. So DHAKAR won HORX in R7.
15	Since GAMONT played P in R5, strategically GAMONT must have played P in R6, and S in R3 and R4.
12	In R5, GAMONT only had P left. So DHAKAR must have played P only because DHAKAR had already played both S in R3 and R4. So BLAISE played R in R4 because he won against DHAKAR.

The final inference step is to determine the remaining plays, based on the fuller knowledge of which cards had been played and which are remaining for certain players:

Used observation numbers	Inferences (made successively within each block with additional observations used)
3	Since ALEKSI has played R in R1 and S in R4, he must had no choice in R5 because he was left with P only for R5 and R7.

Used observation numbers	Inferences (made successively within each block with additional observations used)
	So ALEKSI played P in R5 and R7. And by elimination, ALEKSI played R and won in R3, and drew with S in R2.
14	So in R2, BLAISE played P and won against CAEL who played R.
7	BLAISE lost with R against ALEKSI in R7.
12	In R5, ALEKSI could only play P, so strategically, CAEL played S and won as he still had at least one S available.
16,4,6	In R4, CAEL played R and won against EDRIC who played S.
12	In R6, DHAKAR could only play R, so strategically, CAEL played P and won as he still had a P available. So CAEL played his remaining S in R7.
3	Since FERRIH has played P in R1 and S in R2, he must have had no choice in R6 because he was left with R only for R6 and R7. So FERRIH played R in R6 and R7 (winning both). And by elimination, in R5, FERRIH played P and lost against BLAISE who played S, and FERRIH played S in R3. So BLAISE played his remaining P in R6.
4	EDRIC has only P and R left. Since EDRIC never won, in R3, EDRIC played P against FERRIH and lost. So EDRIC played R in R6 (losing against BLAISE) and R7. So EDRIC played R in R6 (losing against BLAISE) and R7.

With all the inferences complete, the pairing tables below summarize the gestures played by each player in every round:

Round 1

R	Aleksi	v	Edric	S
DH	Blaise	v	Gamont	R
P	Cael	v	Horx	R
P	Dhakar	V	Ferrih	P

Round 2

S	Aleksi	v	Ferrih	S
P	Blaise	v	Cael	R
DH	Dhakar	v	Edric	DH
R	Gamont	v	Horx	R

Round 3

R	Aleksi	v	Dhakar	S
S	Blaise	v	Horx	P
DH	Cael	v	Gamont	S
P	Edric	v	Ferrih	S

Round 4

S	Aleksi	v	Horx	P
R	Blaise	v	Dhakar	S
R	Cael	v	Edric	S
DH	Ferrih	v	Gamont	S

Round 5

P	Aleksi	v	Cael	S
S	Blaise	v	Ferrih	P
P	Dhakar	v	Gamont	P
P	Edric	v	Horx	DH

Round 6

DH	Aleksi	v	Gamont	P
P	Blaise	v	Edric	R
P	Cael	v	Dhakar	R
R	Ferrih	v	Horx	S

Round 7

P	Aleksi	v	Blaise	R
S	Cael	v	Ferrih	R
R	Dhakar	v	Horx	S
R	Edric	v	Gamont	DH

The table below summarizes the points that each player has, and converting these to letters, which give the thematic answer to this puzzle – **PROFANED**.

Players	Wins	Draws	Losses	Points	Converting points to letters
Aleksi	5	1	1	16	P
Blaise	6	0	1	18	R
Cael	5	0	2	15	O
Dhakar	1	3	3	6	F
Edric	0	1	6	1	A
Ferrih	4	2	1	14	N
Gamont	1	2	4	5	E
Horx	1	1	5	4	D

Constructor's notes:

The idea for a card game version of Rock, Paper, Scissors is inspired by [Kaiji](#) and [The Genius](#). I had always found a card version to be more interesting, as there is the strategic element of the constraint on the number of each gesture that could be played, as well as how the choice of which gesture is played impacts the remaining gestures available, and the subsequent strategies (if full knowledge of cards played is known). For this puzzle, I came up with a variant element which is the thematic Death Hand, that also links to the eventual answer. The Death Hand, being superior to all the standard gestures, becomes a variable that needs to be taken out of the equation first, which is the starting logical inference step required to solve this puzzle. For the Einstein-style rules, as usual I tried to optimize them so that there wasn't too much redundancy, but still had enough entry points for solvers. In particular, I wanted to make use of the strategy rule on cards played by each player as a recurring method to infer as many card choices as possible, so as to make the game feel more realistic as well.