PLL Algorithms for Big Cubes

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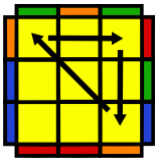
and Andy Klise

Algorithm Presentation Format



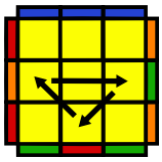
Suggested algorithm here
Alternative algorithms here
PLL Case Name - Probability = 1/x

Round brackets are used to segment algorithms to assist memorisation and group move triggers.

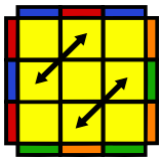
Moves in square brackets at the end of algorithms denote a U face adjustment necessary to complete the cube from the states specified.

Purple text denotes either a change in the suggested algorithm (from the 3x3 PLL Algorithm PDF) or an entire new algorithm.

Permutations of Edges Only

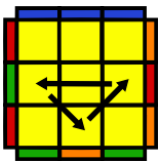


R2 U (R U R' U') R' U' (R' U R')
y2 (R' U R' U') R' U' (R' U R U) R2'
Ub - Probability = 1/18

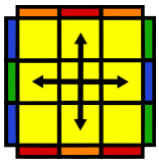


y' (R' U' R U') (R U R U') (R' U R U) (R2 U' R') [U2]
Z - Probability = 1/36

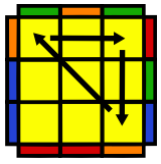
(R U' R U) R U (R U' R' U') R2
y2 (R U R' U) (R' U' R2 U') R' U R' U R [U2]
y2 (R2 U' R' U') R U R U (R U' R)
Ua - Probability = 1/18



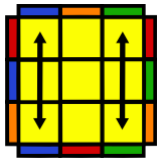
(R2 U2' R U2') (R2' U2' R2 U2') (R U2' R2')
H - Probability = 1/72



Permutations of Corners Only

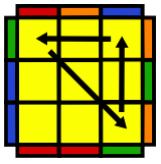


x (R' U R') D2 (R U' R') D2 R2 x'
y x' R2 D2 (R' U' R) D2 (R' U R') x
Aa - Probability = 1/18

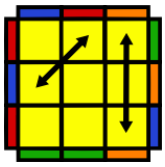


y (R2 U R' U') y (R U R' U') (R U R' U') (R U R') y' (R U' R2')
E - Probability = 1/36

x R2' D2 (R U R') D2 (R U' R) x'
y x' (R U' R) D2 (R' U R) D2 R2' x
Ab - Probability = 1/18



Swap One Set of Adjacent Corners

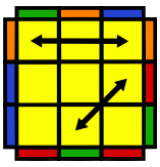


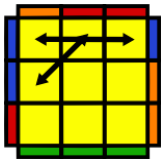
(R U R' F') (R U2' R' U2') (R' F R U) (R U2' R') [U']

Ra - Probability = 1/18

(R' U2 R U2') R' F (R U R' U') R' F' R2 [U']

Rb - Probability = 1/18



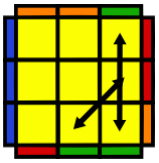


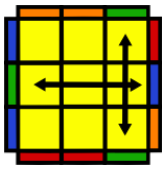
(R' U L' U2) (R U' R' U2 R) L [U']
y (R' U2 R U R' U2) (L U' R U L')

Ja - Probability = 1/18

(R U R' F') (R U R' U') R' F R2 U' R' [U']

Jb - Probability = 1/18



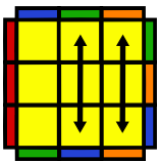


(R U R' U') (R' F R2 U') R' U' (R U R' F')

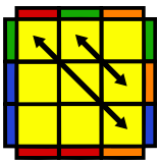
T - Probability = 1/18

(R' U' F')(R U R' U')(R' F R2 U')(R' U' R U)(R' U R)
y (R' U2 R' U') y (R' F' R2 U') (R' U R' F) R U' F

F - Probability = 1/18



Swap One Set of Diagonal Corners

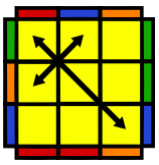


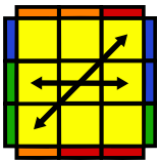
(R' U R' U') y (R' F' R2 U') (R' U R' F) R F

V - Probability = 1/18

F (R U' R' U') (R U R' F') (R U R' U') (R' F R F')

Y - Probability = 1/18



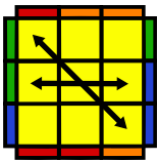


(RUR'U)(RUR'F')(RUR'U')(R'FR2U') R' U2 (RU'R')
z (U R' D) (R2 U' R D') (U R' D) (R2 U' R D') [R'] z'

Na - Probability = 1/72

(R' U R U') (R' F' U' F) (R U R' F) R' F' (R U' R)
(R' U L' U2 R U' L) (R' U L' U2 R U' L) [U]

Nb - Probability = 1/72



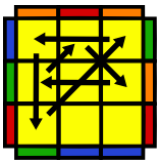
G Permutations (Double cycles)

R2 U (R' U R' U') (R U' R2) D U' (R' U R D') [U]
y (R U R' F') (R U R' U') (R' F R U') (R' F R2 U')
R' U' (R U R' F') [U']

Ga - Probability = 1/18

(F' U' F) (R2 u R' U) (R U' R u') R2'
y' D (R' U' R U) D' (R2 U R' U) (R U' R U') R2' [U']

Gb - Probability = 1/18



y2 R2' F2 (R U2' R U2') R' F (R U R' U') R' F R2
R2 U' (R U' R U) (R' U R2 D') (U R U' R') D [U']

Gc - Probability = 1/18

D' (R U R' U') D (R2 U' R U') (R' U R' U) R2 [U]
(R U R' F') (R U R' U) (R U' R' U') (R' F R2 U)
(R' U' R U' R')

Gd - Probability = 1/18