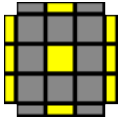




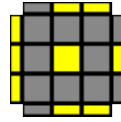
OLL

Page 1



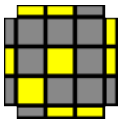
OLL 1
Dot Case

R U2 R2 F R F' U2 R' F R F'
y R U' R2 D' r U' r' D R2 U R'
R U2' R2' F R F' U2' R' F R F'
M R U R' U R U' R' U r U2' r' U' M'



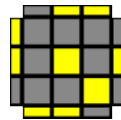
OLL 2
Dot Case

y' R U' R2' D' r U' r' D R2 U R'
F R U R' U' S R U R' U' f'
y r U' r' U2 R U2 R' U2 r U' r'
F R U R' U' F' f R U R' U' f'



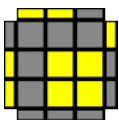
OLL 3
Dot Case

y R' F2 R2 U2 R' F R U2 R2 F2 R
r' R2 U R' U r U2 r' U M'
y' f R U R' U' f' U' F R U R' U' F'
M R U R' U r U2 r' U M'



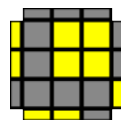
OLL 4
Dot Case

y' R' F2 R2 U2 R' F' R U2 R2 F2 R
y' f R U R' U' f' U F R U R' U' F'
M U' r U2 r' U' R U' R' M'
I L2' U' L U' l' U2 l U' M'



OLL 5
Square Shapes

r' U2 R U R' U r
y2 l' U2 L U L' U l
y2 R' F2 r U r' F R
r' U2' R U R' U r



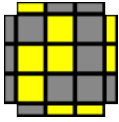
OLL 6
Square Shapes

r U2 R' U' R U' r'
r U2' R' U' R U' r'
y2 l U2 L' U' L U' l'
y' x' D R2 U' R' U R' D' x



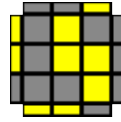
OLL

Page 2



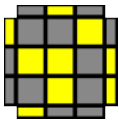
OLL 7
Lightning Shapes

r U R' U R U2 r'
r U R' U R U2' r'
y2 l U L' U L U2 l'
F R' F' R U2 R U2 R'



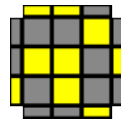
OLL 8
Lightning Shapes

l' U' L U' L' U2 l
y2 r' U' R U' R' U2 r
R U2 R' U2 R' F R F'
R' F' r U' r' F2 R



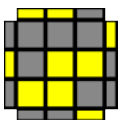
OLL 9
Fish Shapes

y R U R' U' R' F R2 U R' U' F'
R U2' R' U' S' R U' R' S
y' L' U' L U' L F' L' F L' U2 L
y2 F' U' F r U' r' U r U r'



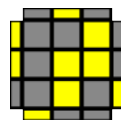
OLL 10
Fish Shapes

R U R' U R' F R F' R U2 R'
y F U F' R' F R U' R' F' R
y M' R' U2 R U R' U R U M
y2 L' U' L U L F' L2 U' L U F



OLL 11
Lightning Shapes

r' R2 U R' U R U2 R' U M'
M R U R' U R U2 R' U M'
y2 r U R' U R' F R F' R U2 r'
y2 S' U2 R U R' U R U2 R' S



OLL 12
Lightning Shapes

y' M' R' U' R U' R' U2 R U' M
y' S R' U' R U' R' U2' R U2 S'
F R U R' U' F' U F R U R' U' F'
y l L2 U' L U' L' U2 L U' M'



OLL

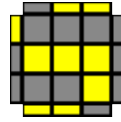
Page 3



OLL 13

Knight Move Shapes

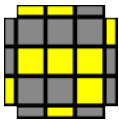
FURU²R'URUR'F'
 FURUR²F'RURUR'
 rU'r'U'rUr'FUF
 rU'r'U'rUr'y'R'UR



OLL 14

Knight Move Shapes

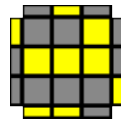
R'FRUR'F'RFUF'
 rUR'U'r'FR²UR'UF'
 l'U'l'U'l'UFUF'
 F'U'L'UL²FL'U'L'UL



OLL 15

Knight Move Shapes

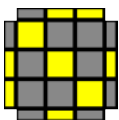
y²l'U'l'L'U'L'U'l'U'l
 r'U'r'R'U'RUR'Ur
 r'U'M'U'RUR'Ur
 y²R'F'RL'U'LUR'FR



OLL 16

Knight Move Shapes

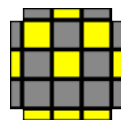
rUr'RUR'U'rU'r'
 rUMUR'U'rU'r'
 y²R'FRUR'U'F'RUR'U²R
 y²l'U'l'L'U'L'U'l'U'l'



OLL 17

Dot Case

RUR'UR'FRF'U²R'FRF'
 y²FR'F'RUS'RUR'S
 y²FR'F'R²r'URUR'U'M'
 y'F'rUr'U'Sr'FrS'



OLL 18

Dot Case

yRU²R²FRF'U²M'URU'r'
 rUR'URU²r²U'RUR'U²r
 yFS'RUR'SRU²R'U'F'
 RD'r'U'rD'R'U'R²FRF'R



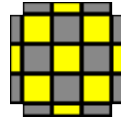
OLL

Page 4



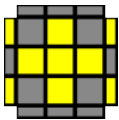
OLL 19
Dot Case

y S' R U R' S U' R' F R F'
M U R U R' U' M' R' F R F'
y² r U² R' U' R U' r² U² R U R' U r
r' R U R U R' U' r R² F R F'



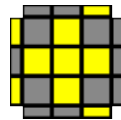
OLL 20
Dot Case

S' R U R' S U' M' U R U' r'
r U R' U' M² U R U' R' U' M'
S R' U' R U R U R U' R' S'
M U R U R' U' M² U R U' r'



OLL 21
COLL

R U R' U R U' R' U R U² R'
y R U² R' U' R U R' U' R U' R'
y F R U R' U' R U R' U' R U R' U' F'
y R' U² R U R' U' R U R' U R



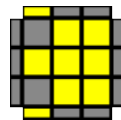
OLL 22
COLL

R U² R² U' R² U' R² U² R
R U²' R²' U' R² U' R²' U²' R
R' U² R² U R² U R² U² R'
f R U R' U' S' R U R' U' F'



OLL 23
COLL

R² D R' U² R D' R' U² R'
y² R² D' R U² R' D R U² R
R U R' U R U² R² U' R U' R' U² R
y R U R' U' R U' R' U² R U' R' U² R U R'



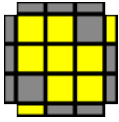
OLL 24
COLL

r U R' U' r' F R F'
y² R' F' r U R U' r' F
y R U R D R' U' R D' R²
y' R' U' R' D' R U R' D R²



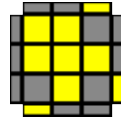
OLL

Page 5



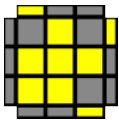
OLL 25
COLL

y F' r U R' U' r' F R
F R' F' r U R U' r'
y' x' R U' R' D R U R' D' x
x R' U R D' R' U' R D x'



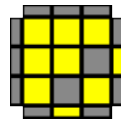
OLL 26
COLL

y R U² R' U' R U' R'
R' U' R U' R' U² R
y² L' U' L U' L' U² L
y R U² R' U' R U' R'



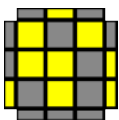
OLL 27
COLL

R U R' U R U² R'
y' R' U² R U R' U R
R U R' U R U² R'
y L' U² L U L' U L



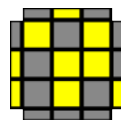
OLL 28
All Corners Oriented

r U R' U' M U R U' R'
y² M' U M U² M' U M
r U R' U' r' R U R U' R'
R' F R S R' F' R S'



OLL 29
Awkward Shapes

r² D' r U r' D r² U' r' U' r
y R U R' U' R U' R' F' U' F R U R'
y S' R U R' U' R' F R F' U S
M U R U R' U' R' F R F' M'



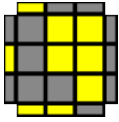
OLL 30
Awkward Shapes

y' r' D' r U' r' D r² U' r' U r U r'
y² F U R U² R' U' R U² R' U' F'
y² F R' F R² U' R' U' R U R' F²
y S' R' U' R f R' U R U' F'



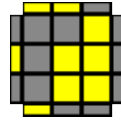
OLL

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OLL 31
P Shapes

R' U' F U R U' R' F' R
y S R U R' U' f' U' F
y2 S' r' F' r U r U' r' f
y' F R' F' R U R U R' U' R U' R'



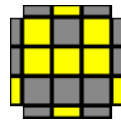
OLL 32
P Shapes

S R U R' U' R' F R f'
y2 L U F' U' L' U L F L'
R U B' U' R' U R B R'
y' R' F R F' U' r U' r' U r U r'



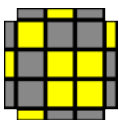
OLL 33
T Shapes

R U R' U' R' F R F'
y2 L' U' L U L F' L' F
y2 r' F' r U r U' r' F
F R U' R' U R U R' F'



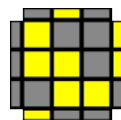
OLL 34
C Shapes

y f R f' U' r' U' R U M'
y2 R U R2 U' R' F R U R U' F'
y2 R U R' U' B' R' F R F' B
F R U R' U' R' F' r U R U' r'



OLL 35
Fish Shapes

R U2 R2 F R F' R U2 R'
R U2' R2' F R F' R U2' R'
f R U R' U' f' R U R' U R U2 R'
y2 R2' F R F' R U2' R' U R U2 R' U' R



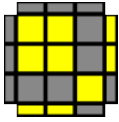
OLL 36
W Shapes

y2 L' U' L U' L' U L U L F' L' F
y R U R2 F' U' F U R2 U2 R'
y2 R U R' F' R U R' U' R' F R U' R' F R F'
y2 R' F' U' F2 U R U' R' F' R



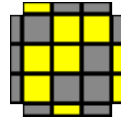
OLL

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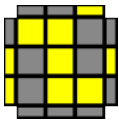
OLL 37
Fish Shapes

FR'F'RURU'R'
FRU'R'U'RUR'F'
yF'rU'r'U'r'Fr
y2r2D'rU'r'DrUr



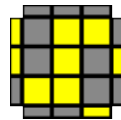
OLL 38
W Shapes

RUR'URU'R'U'R'FRF'
yFRU'R'SU'RUR'f'
rUR'U'r'FRURU'R'F'
y2r'F'rUFU2F'U'r'F'r



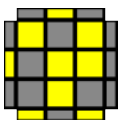
OLL 39
Lightning Shapes

y'f'rUr'U'r'FrS
yLF'L'U'LUFU'L'
y'RUR'F'U'FURU2R'
y'RB'R'U'RUBU'R'



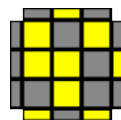
OLL 40
Lightning Shapes

yR'FRUR'U'F'UR
y'fR'F'RURU'R'S'
RrDr'UrD'r'U'R'
UFRUR'F'R'FU'F'UR



OLL 41
Awkward Shapes

y2RUR'URU2R'FRUR'U'F'
y2FUR2DR'U'RD'R2F'
y'SU'R'F'U'FURS'
y2R'F'U'FRS'R'URS



OLL 42
Awkward Shapes

R'U'R'U'R'U2RFRUR'U'F'
yFS'RUR'U'F'US
yR'U'F2u'RUR'DR2B
yR'FRF'R'FRF'RUR'U'RUR'



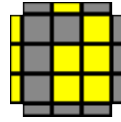
OLL

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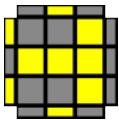
OLL 43
P Shapes

y R' U' F' U F R
y2 F' U' L' U L F
f' L' U' L U f
y' r' F' U' F U r



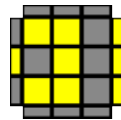
OLL 44
P Shapes

y2 F U R U' R' F'
f R U R' U' f'
y R U B U' B' R'
y' F R U' R' F' L' U L



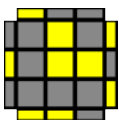
OLL 45
T Shapes

F R U R' U' F'
y R' F' U' F U R
y2 f U R U' R' f'
y2 F' L' U' L U F



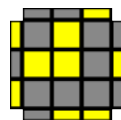
OLL 46
C Shapes

R' U' R' F R F' U R
y2 r' U' F R' F' R U r
y F R U R' y' R' U R U2 R'
y2 L U L F' L' F U' L'



OLL 47
L Shapes

F' L' U' L U L' U' L U F
y' F R' F' R U2 R U' R' U R U2 R'
R' U' R' F R F' R' F R F' U R
y2 f' U' L' U L U' L' U L f



OLL 48
L Shapes

F R U R' U' R U R' U' F'
y2 f U R U' R' U R U' R' f'
R U2 R' U' R U R' U2 R' F R F'
y2 R U R' U R U2 R' U' F R U R' U' F'



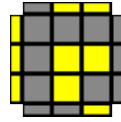
OLL

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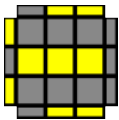
OLL 49
L Shapes

y2 r U' r2 U r2 U r2 U' r
l U' l2 U l2 U l2 U' l
R B' R2 F R2 B R2 F' R
y2 R' F R' F' R2 U2 B' R B R'



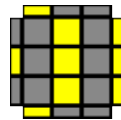
OLL 50
L Shapes

r' U r2 U' r2 U' r2 U r'
y2 R' F R2 B' R2 F' R2 B R'
y2 l' U l2 U' l2 U' l2 U l'
y' R U2 R' U' R U' R' F R U R' U' F'



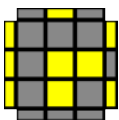
OLL 51
Line Shapes

y2 F U R U' R' U R U' R' F'
f R U R' U' R U R' U' f'
y' R' U' R' F R F' R U' R' U2 R
R U2' R' U2 R' F R2 U R' U' F'



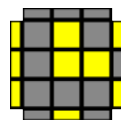
OLL 52
Line Shapes

y2 R' F' U' F U' R U R' U R
R U R' U R U' B U' B' R'
R U R' U R d' R U' R' F'
R' U' R U' R' U F' U F R



OLL 53
L Shapes

r' U' R U' R' U R U' R' U2 r
y2 l' U' L U' L' U L U' L' U2 l
y r' U2 R U R' U' R U R' U r
y' l' U2 L U L' U' L U L' U l



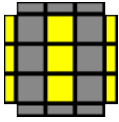
OLL 54
L Shapes

r U R' U R U' R' U R U2 r'
y' r U2 R' U' R U R' U' R U' r'
r U R' U R U' R' U R U2' r'
y2 l U L' U L U' L' U L U2 l'



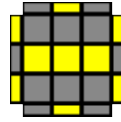
OLL

Page 10



OLL 55
Line Shapes

y R' F U R U' R2 F' R2 U R' U' R
R U2 R2 U' R U' R' U2 F R F'
y R' F R U R U' R2 F' R2 U' R' U R U R'
y F U' R2 D R' U2 R D' R2 U F'



OLL 56
Line Shapes

r U r' U R U' R' M' U R U2 r'
r U r' U R U' R' U R U' R' r U' r'
F R U R' U' R F' r U R' U' r'
r U r' U R U' R' U R U' M' U' r'



OLL 57
All Corners Oriented

R U R' U' M' U R U' r'
y R U' R' S' R U R' S
y R U R' S' R U' R' S
y S R' F R S' R' F' R