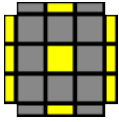




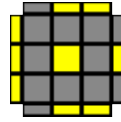
OLL

Page 1



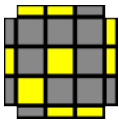
OLL 1
Dot Case

R U2 R2 F R F' U2 R' F R F'
y R U' R2 D' r U' r' D R2 U R'
R' U' F R' F' R2 U R f' U' f
L' U2 L2 F' L' F U2 L F' L' F



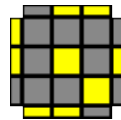
OLL 2
Dot Case

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'



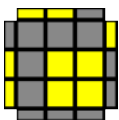
OLL 3
Dot Case

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



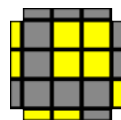
OLL 4
Dot Case

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' I' U2 I U' M'



OLL 5
Square Shapes

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



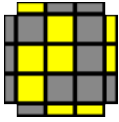
OLL 6
Square Shapes

r U2 R' U' R U' r'
y2 I U2 L' U' L U' I'
F U' R2 D R' U' R D' R2 U F'
L F2 I' U' I F' L'



OLL

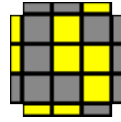
Page 2



OLL 7

Lightning Shapes

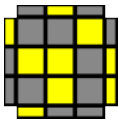
r U R' U R U2 r'
y2 l U L' U L U2 l'
r U r' U R U' R' r U' r'
y2 R' U2 R U2 R f' U' f



OLL 8

Lightning Shapes

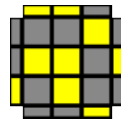
y2 r' U' R U' R' U2 r
l' U' L U' L' U2 l
R U2 R' U2 R' F R F'
R' F' r U' r' F2 R



OLL 9

Fish Shapes

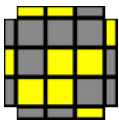
y R U R' U' R' F R2 U R' U' F'
R U2 R' U' S' R U' R' S
y2 F' U' F r U' r' U r U r'
y' L' U' L U' L F' L' F L' U2 L



OLL 10

Fish Shapes

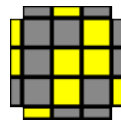
R U R' U R' F R F' R U2 R'
y F U F' R' F R U' R' F' R
y2 L' U' L U L F' L2 U' L U F
y M' R' U2 R U R' U R U M



OLL 11

Lightning Shapes

r' R2 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
S R U R' U R U2 R' U2 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' r R2 U' R U' R' U2 R U' R r'



OLL

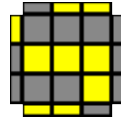
Page 3



OLL 13

Knight Move Shapes

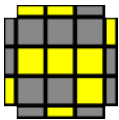
FURU²R'URUR'F'
FURUR²F'RURUR'
rU'r'U'rUr'F'UF
rU'r'U'rUr'yL'UL



OLL 14

Knight Move Shapes

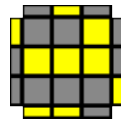
R'FRUR'F'RFU'F'
rUR'U'r'FR²UR'U'F'
F'U'L'UL²FL'U'L'UL
l'UlU'l'U'lFU'F'



OLL 15

Knight Move Shapes

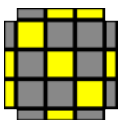
r'U'rR'URUr'Ur
y²l'U'lL'U'LUI'U'l
y²R'F'RL'U'LUR'FR
r'U'M'URUr'Ur



OLL 16

Knight Move Shapes

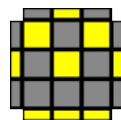
rUr'RUR'U'rU'r'
rUMUR'U'rU'r'
y²R'FRUR'U'F'RUR'U²R
y²lU'lLUL'U'lU'l'



OLL 17

Dot Case

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



OLL 18

Dot Case

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



OLL

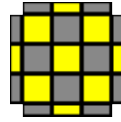
Page 4



OLL 19

Dot Case

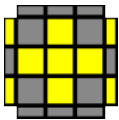
y S' R U R' S U' R' F R F'
M U R U R' U' M' R' F R F'
R' U2 F R U R' U' F2 U2 F R
y2 r U2 R' U' R U' r2 U2 R U R' U r



OLL 20

Dot Case

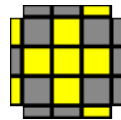
r U R' U' M2 U R U' R' U' M'
S' R U R' S U' M' U R U' r'
M U R U R' U' M2 U R U' r'
S R' U' R U R U R U' R' S'



OLL 21

OCLL

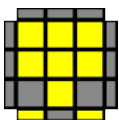
R U R' U R U' R' U R U2 R'
y R U2 R' U' R U R' U' R U' R'
y F R U R' U' R U R' U' R U R' U' F'
R' U' R U' R' U R U' R' U2 R



OLL 22

OCLL

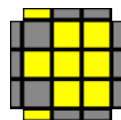
R U2 R2 U' R2 U' R2 U2 R
R' U2 R2 U R2 U R2 U2 R'
f R U R' U' S' R U R' U' F'
f R U R' U' f' F R U R' U' F'



OLL 23

OCLL

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



OLL 24

OCLL

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



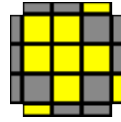
OLL

Page 5



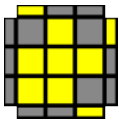
OLL 25
OCLL

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



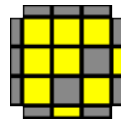
OLL 26
OCLL

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



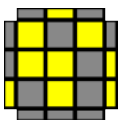
OLL 27
OCLL

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



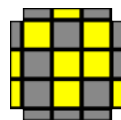
OLL 28
All Corners Oriented

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 R' F R2 U' R' U' R U R' F2
y2 F U R U2 R' U' R U2 R' U' F'
y S' R' U' R f R' U R U' F'



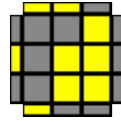
OLL

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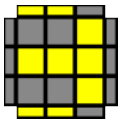
OLL 31
P Shapes

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



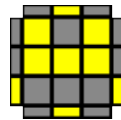
OLL 32
P Shapes

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'



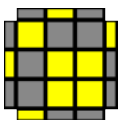
OLL 33
T Shapes

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
R U R' F' U' F R U' R'



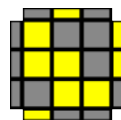
OLL 34
C Shapes

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



OLL 35
Fish Shapes

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
y L' U2 L2 F' L' F L' U2 L



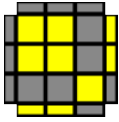
OLL 36
W Shapes

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



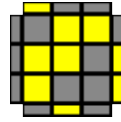
OLL

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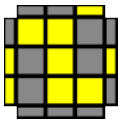
OLL 37
Fish Shapes

FRU'R'URUR'F'
FR'F'RURUR'
yF'rUr'U'r'Fr
yF'L'ULUL'U'LF



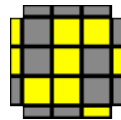
OLL 38
W Shapes

RUR'URUR'U'R'FRF'
yFRU'R'SURUR'f'
L'U'LFL'U'LULF'L'ULF'L'F
U2FRUR'R2FRF'U'F2rUr2F2r



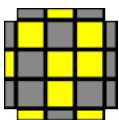
OLL 39
Lightning Shapes

y'f'rUr'U'r'FrS
yLF'L'U'LUFU'L'
y'RUR'F'U'FURU2R'
y'f'LFL'U'L'ULS



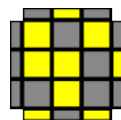
OLL 40
Lightning Shapes

yR'FRUR'U'F'UR
y'fR'F'RURUR'S'
RrDr'UrD'r'U'R'
MF'LFL'U'L'ULUM'



OLL 41
Awkward Shapes

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



OLL 42
Awkward Shapes

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



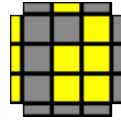
OLL

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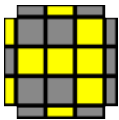
OLL 43
P Shapes

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



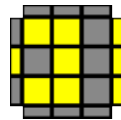
OLL 44
P Shapes

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



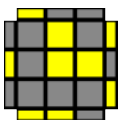
OLL 45
T Shapes

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



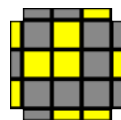
OLL 46
C Shapes

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



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'
F R' F' U2 R U R' U R2 U2 R'



OLL

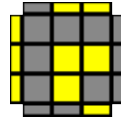
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OLL 49

L Shapes

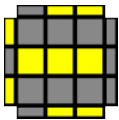
y2 r U' r2 U r2 U r2 U' r
l U' l2 U l2 U l2 U' l
R B' R2 F R2 B R2 F' R
y F U R U' R' F' R' U' R U' R' U2 R



OLL 50

L Shapes

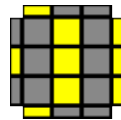
r' U r2 U' r2 U' r2 U r'
y2 R' F R2 B' R2 F' R2 B R'
y' R U2 R' U' R U' R' F R U R' U' F'
y2 l' U l2 U' l2 U' l2 U l'



OLL 51

Line Shapes

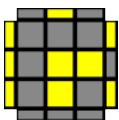
y2 F U R U' R' U R U' R' F'
f R U R' U' R U R' U' f'
y' R' U' R' F R F' R U' R' U2 R
y r' F' U' F U F' U' F U r



OLL 52

Line Shapes

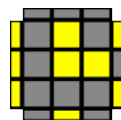
y2 R' F' U' F U' R U R' U R
R U R' U R U' B U' B' R'
R U R' U R d' R U' R' F'
R' U' R U' R' U F' U F R



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

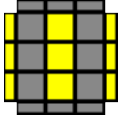
L Shapes

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



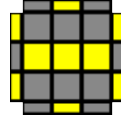
OLL

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