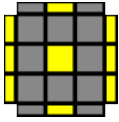




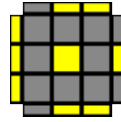
## OLL

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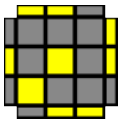
**OLL 1**  
Dot Case

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  
f R U R' U' R f' U' r' U' R U M'



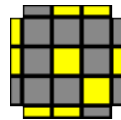
**OLL 2**  
Dot Case

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



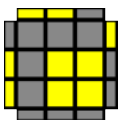
**OLL 3**  
Dot Case

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'



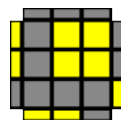
**OLL 4**  
Dot Case

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' 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  
y2 R' F R' F' R2 y U' R U' R'



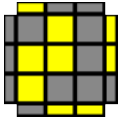
**OLL 6**  
Square Shapes

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



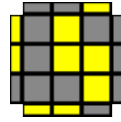
## OLL

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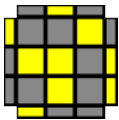
**OLL 7**  
Lightning Shapes

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'  
F R' F' R U2 R U2 R'



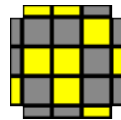
**OLL 8**  
Lightning Shapes

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



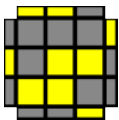
**OLL 9**  
Fish Shapes

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



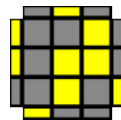
**OLL 10**  
Fish Shapes

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'  
S R U R' U R U2 R' U2 S'  
M R U R' U R U2 R' U M'



**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

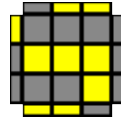
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### OLL 13

**Knight Move Shapes**

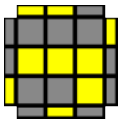
FURU'R2F'RURU'R'  
 FURU2R'URUR'F'  
 rU'r'U'rUr'FUF  
 rU'r'U'rUr'yL'UL



### OLL 14

**Knight Move Shapes**

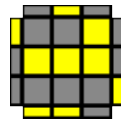
R'FRUR'F'RFU'F'  
 rUR'U'r'FR2UR'U'F'  
 l'UlU'l'U'lFU'F'  
 F'U'L'UL2FL'U'L'UL



### OLL 15

**Knight Move Shapes**

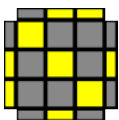
r'U'rR'URUr'Ur  
 y2l'U'lL'U'lLU'lU'l  
 y2R'F'RL'U'LUR'FR  
 r'U'M'URUR'Ur



### OLL 16

**Knight Move Shapes**

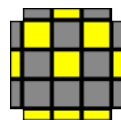
rUr'RUR'U'rU'r'  
 rUMUR'U'rU'r'  
 y2R'FRUR'U'F'RUR'R'U2R  
 y2lU'lLUL'U'lU'l'



### 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

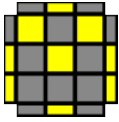
**Dot Case**

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



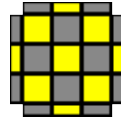
## OLL

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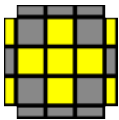
**OLL 19**  
Dot Case

y S' R U R' S U' R' F R F'  
M U R U R' U' M' R' F R F'  
R' U<sup>2</sup> F R U R' U' F<sup>2</sup> U<sup>2</sup> F R  
r' R U R U R' U' r R<sup>2</sup> F R F'



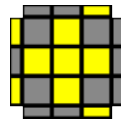
**OLL 20**  
Dot Case

r U R' U' M<sup>2</sup> U R U' R' U' M'  
S' R U R' S U' M' U R U' r'  
M U R U R' U' M<sup>2</sup> U R U' r'  
S R' U' R U R U R U' R' S'



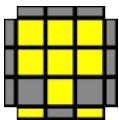
**OLL 21**  
OCLL

R U R' U R U' R' U R U<sup>2</sup> R'  
y R U<sup>2</sup> 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' U<sup>2</sup> R



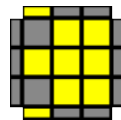
**OLL 22**  
OCLL

R U<sup>2</sup> R<sup>2</sup> U' R<sup>2</sup> U' R<sup>2</sup> U<sup>2</sup> R  
R' U<sup>2</sup> R<sup>2</sup> U R<sup>2</sup> U R<sup>2</sup> U<sup>2</sup> R'  
f R U R' U' S' R U R' U' F'  
R U R' U' R' U<sup>2</sup> R U R' U R<sup>2</sup> U<sup>2</sup> R'



**OLL 23**  
OCLL

R<sup>2</sup> D R' U<sup>2</sup> R D' R' U<sup>2</sup> R'  
y<sup>2</sup> R<sup>2</sup> D' R U<sup>2</sup> R' D R U<sup>2</sup> R  
R U R' U R U<sup>2</sup> R<sup>2</sup> U' R U' R' U<sup>2</sup> R  
y' R U<sup>2</sup> R' U' R U' R' L' U<sup>2</sup> L U L' U L



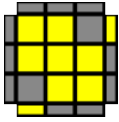
**OLL 24**  
OCLL

r U R' U' r' F R F'  
y R U R D R' U' R D' R<sup>2</sup>  
y<sup>2</sup> R' F' r U R U' r' F  
y' R' U' R' D' R U R' D R<sup>2</sup>



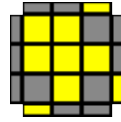
## OLL

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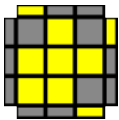
**OLL 25**  
OCLL

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'  
R' F R B' R' F' R B



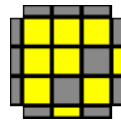
**OLL 26**  
OCLL

y R U<sup>2</sup> R' U' R U' R'  
R' U' R U' R' U<sup>2</sup> R  
y<sup>2</sup> L' U' L U' L' U<sup>2</sup> L  
y<sup>2</sup> L' U R U' L U R'



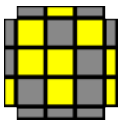
**OLL 27**  
OCLL

R U R' U R U<sup>2</sup> R'  
y' R' U<sup>2</sup> R U R' U R  
y L' U<sup>2</sup> L U L' U L  
y<sup>2</sup> L U L' U L U<sup>2</sup> L'



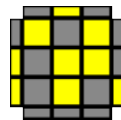
**OLL 28**  
All Corners Oriented

r U R' U' M U R U' R'  
y<sup>2</sup> M' U M U<sup>2</sup> M' U M  
R' F R S R' F' R S'  
r U R' U' r' R U R U' R'



**OLL 29**  
Awkward Shapes

r<sup>2</sup> D' r U r' D r<sup>2</sup> U' r' U' r  
y R U R' U' R U' R' F' U' F R U R'  
M U R U R' U' R' F R F' M'  
y S' R U R' U' R' F R F' U S



**OLL 30**  
Awkward Shapes

y' r' D' r U' r' D r<sup>2</sup> U' r' U r U r'  
y<sup>2</sup> F U R U<sup>2</sup> R' U' R U<sup>2</sup> R' U' F'  
y<sup>2</sup> F R' F R<sup>2</sup> U' R' U' R U R' F<sup>2</sup>  
M U' L' U' L U L F' L' F M'



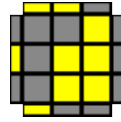
## OLL

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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'



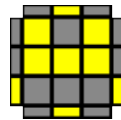
**OLL 32**  
P Shapes

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'



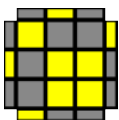
**OLL 33**  
T Shapes

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



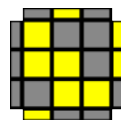
**OLL 34**  
C Shapes

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



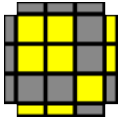
**OLL 36**  
W Shapes

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



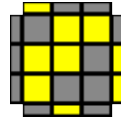
## OLL

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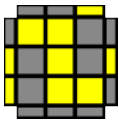
**OLL 37**  
Fish Shapes

FRU'R'URUR'F'  
FR'FRURUR'  
yF'rU'r'U'r'Fr  
y2r2D'rU'r'DrUr



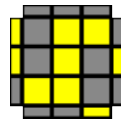
**OLL 38**  
W Shapes

RUR'URUR'UR'FRF'  
yFRUR'SURUR'f'  
L'U'LFL'U'LULF'L'ULF'L'F  
U2FRUR'R2FRF'U'F2rUr2F2r



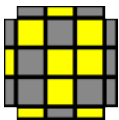
**OLL 39**  
Lightning Shapes

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



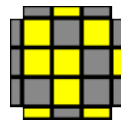
**OLL 40**  
Lightning Shapes

yR'FRUR'U'F'UR  
y'fR'FRURUR'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'URUR'R'U2RFRUR'U'F'  
yFS'RUR'U'F'US  
yR'FRF'R'FRF'RUR'URUR'  
yR'U'F2u'RUR'DR2B



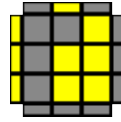
## OLL

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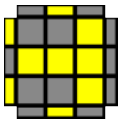
**OLL 43**  
P Shapes

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



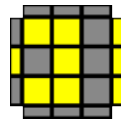
**OLL 44**  
P Shapes

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



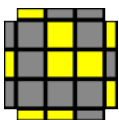
**OLL 45**  
T Shapes

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



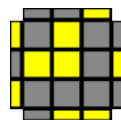
**OLL 46**  
C Shapes

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





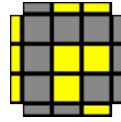
## OLL

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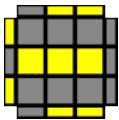
**OLL 49**  
L Shapes

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



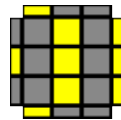
**OLL 50**  
L Shapes

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'



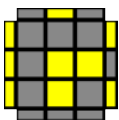
**OLL 51**  
Line Shapes

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



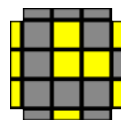
**OLL 52**  
Line Shapes

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' y R U' R' F'



**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



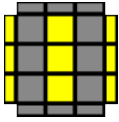
**OLL 54**  
L Shapes

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



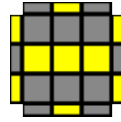
## OLL

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**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 S R' F R S' R' F' R  
y R U R' S' R U R' S