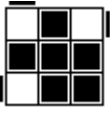
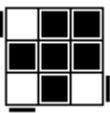
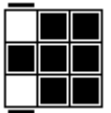
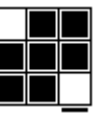
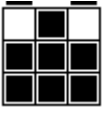
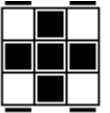
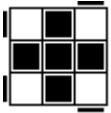
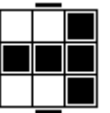

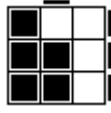
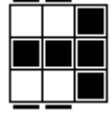
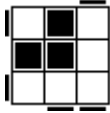
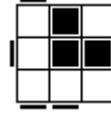
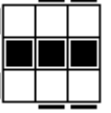
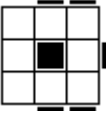
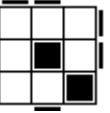
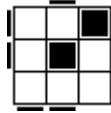
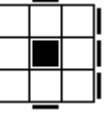

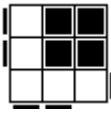
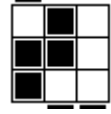
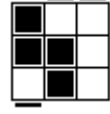
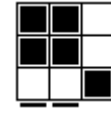
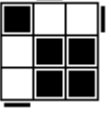
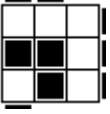
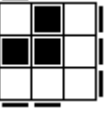
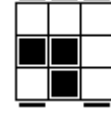
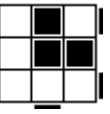
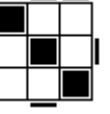
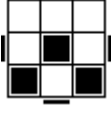
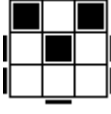
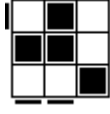
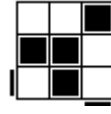
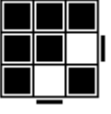
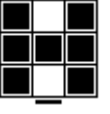
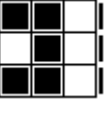
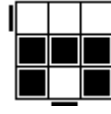
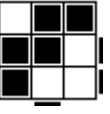
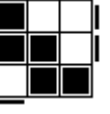
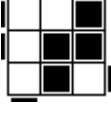
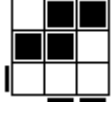
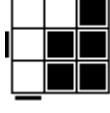
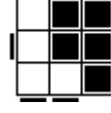
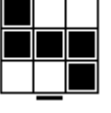
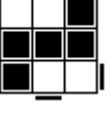
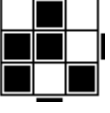
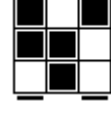

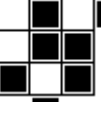
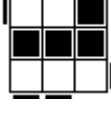
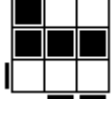
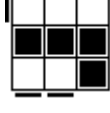
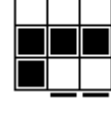
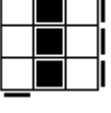
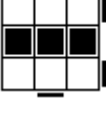
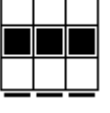
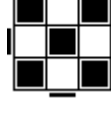
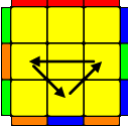
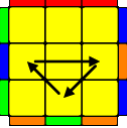
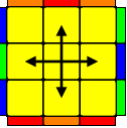
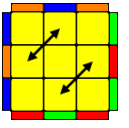
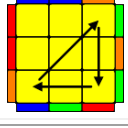
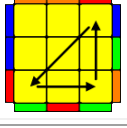
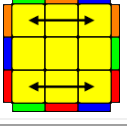


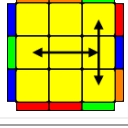
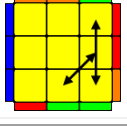
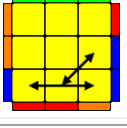
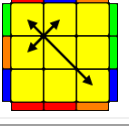
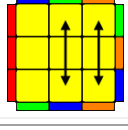
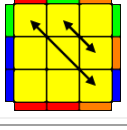
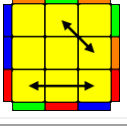
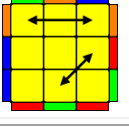
<p>魔方小站 CFOP 公式表 OLL 按小站顺序分组 (2014/8/26 更新)</p>	<p>1-1  R' U2 R U R' U R</p>	<p>1-2  R U' U' R' U' R U' R'</p>	<p>1-3  (r U R' U') (r' F R F')</p>	<p>1-4  F' (r U R' U') (r' F R)</p>	<p>1-5  (R2 D') (R U' U') (R' D) (R U' U' R)</p>	<p>1-6  (R U U R' U') (R U R' U') (R U' R')</p>	<p>1-7  R U' U' (R2' U') (R2 U') R2' U2 R</p>	<p>2-1  F (R U R' U') F'</p>	<p>2-2  f (R U R' U') f'</p>
<p>2-3  B' U' (R' U R B)</p>	<p>2-4  (R U R' U') (R' F R F')</p>	<p>2-5  F (R U R' U')2 F'</p>	<p>2-6  F' (L' U' L U)2 F</p>	<p>2-7  f (R U R' U')2 f'</p>	<p>3-1  (F R U R' U' F') (f R U R' U' f')</p>	<p>3-2  (f R U R' U' f') U' (F R U R' U' F')</p>	<p>3-3  (f R U R' U' f') U (F R U R' U' F')</p>	<p>3-4  (R U' U') (R2' F R F') U2 (R' F R F')</p>	<p>3-5  (r' U2) (R U R' U) r</p>
<p>3-6  (r U' U') (R' U' R U' r')</p>	<p>3-7  r U R' U R U U r'</p>	<p>3-8  r' U' R U' R' U2 r</p>	<p>4-1  F (R U' R' U') (R U R' F')</p>	<p>4-2  R U' U' (R2' F R F')(R U' U' R')</p>	<p>4-3  (R B') (R2 F) (R2 B) (R2 F') R</p>	<p>4-4  (R' F) (R2 B') (R2 F') (R2 B) R'</p>	<p>4-5  r' U2 (R U R' U') (R U R' U) r</p>	<p>4-6  r U (R' U R U')2 U' r'</p>	<p>4-7  (R U R' U) (R' F R F') U2 (R' F R F')</p>
<p>4-8  F (R U R' U) y' (R' U2) (R' F R F')</p>	<p>4-9  (M_下 U) (R U R' U') M_上 (R' F R F')</p>	<p>5-1  (R U R' U') (R' F) (R2 U R' U') F'</p>	<p>5-2  (R U R' U) (R' F R F') (R U' U' R')</p>	<p>5-3  (r U R' U') (r' R) (U R U' R')</p>	<p>5-4  (R U R' U') r R' (U R U' r')</p>	<p>5-5  (R' U') (R' F R F') (U R)</p>	<p>5-6  (R U R' U') x D' (R' U R) E'</p>	<p>5-7  (R U R' U) (R U' R' U') (R' F R F')</p>	<p>5-8  (R' U' R U') (R' U R U) (U' R' U U)</p>
<p>5-9  (F R U R' U' F') U (F R U R' U' F')</p>	<p>5-10  (r U R' U) (R' F R F') R U2 r'</p>	<p>6-1  (R U) (B' U') (R' U R B R')</p>	<p>6-2  (R' U' F) (U R U') (R' F' R)</p>	<p>6-3  R' F (R U R' U') F' (U R)</p>	<p>6-4  L F' (L' U' L U) F (U' L')</p>	<p>6-5  (R U R' U R U2 R') (F R U R' U' F')</p>	<p>6-6  (R' U' R U' R' U2 R) (F R U R' U' F')</p>	<p>6-7  (r' U2 R U R' U r) (R U2 R' U' R U' R')</p>	<p>6-8  (r U2 R' U' R U' r') (R' U2 R U R' U R)</p>
<p>7-1  (r U r') (R U R' U') (r U' r')</p>	<p>7-2  (l' U' l) (L' U' L U) (l' U l)</p>	<p>7-3  R' F (R U R' F' R) y' (R U' R')</p>	<p>7-4  F (U R U') (R2' F') (R U R U' R')</p>	<p>7-5  (R' U' R U') (R' U) y' (R' U R B)</p>	<p>7-6  (r U r') (U R U' R')2 (r U' r')</p>	<p>7-7  R' F (U R U') (R2' F') (R2 U R' U' R)</p>	<p>7-8  (r' R U) (R U R' U') (r2 R2') (U R U' r')</p>	<p>公式5-6里的E'的意思是：从上往下看时，顺时针转水平的中间层。国际规定E和D顺逆方向一致。</p>	<p>如对标记有问题，请到最后页去看标记说明。</p>

魔方小站 CFOP 公式表 PLL

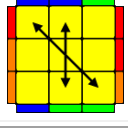
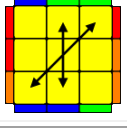
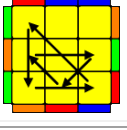
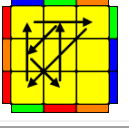
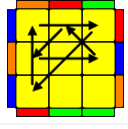
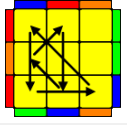
第 1 组 简版 CFOP 里面的 7 个 PLL 公式

			
1-1 (R U' R) U (R U R U') (R' U' R2)	1-2 (R2' U) (R U R' U') (R' U') (R' U R')	1-3 M2 U M2 U2 M2 U M2	1-4 (M2 U M2 U) (M 上 U2) (M2 U2) (M 上 U2)
			
1-5 x' R2 D2 (R' U' R) D2 (R' U R') x	1-6 x' (R U' R) D2 (R' U R) D2 R2 x	1-7 (R2 U R' U') y (R U R' U')2 (R U R') y' (R U' R2)	

第 2 组 8 个关键的 PLL 公式

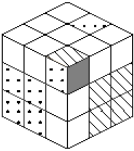
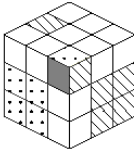
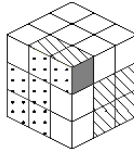
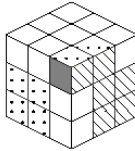
			
2-1 (R U R' U') (R' F R2 U' R' U') (R U R' F')	2-2 (R U R' F') (R U R' U') (R' F R2 U' R' U')	2-3 z (U' R D') (R2 U R' U') (R2 U) D R'	2-4 F (R U' R' U') (R U R' F') (R U R' U') (R' F R F')
			
2-5 U' (R' U R U') R2' b' x (R' U R) y' (R U R' U' R2)	2-6 (R' U R' d') (R' F') (R2 U' R' U) (R' F R F')	2-7 (R U' U') (R' U2) (R B' R' U') (R U R B) R2' U	2-8 (R' U2) (R U' U') (R' F R U R' U') (R' F' R2 U')

第 3 组 最后 6 个较难的 PLL 公式

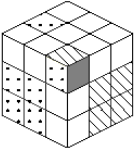
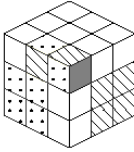
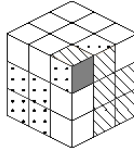
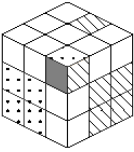
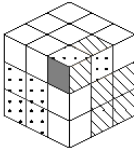
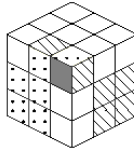
			
3-1 z (R' U R') z' (R U2 L' U R') z (U R') z' (R U2 L' U R')	3-2 z (U' R D') (R2 U R' U') z' (R U R') z (R2 U R') D R'	3-3 (R2' u') (R U' R) U (R' u R2') y (R U' R')	3-4 (R U R') y' (R2' u') (R U' R' U) (R' u R2)
			
3-5 (R2' u R') (U R' U') (R u' R2') y' (R' U R)	3-6 (R' d' F) (R2' u R') U (R U' R) u' R2	如对标记有问题，请到 最后一页去看标记说明。	

魔方小站 CFOP 公式表 F2L

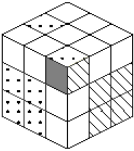
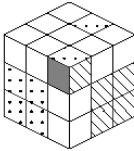
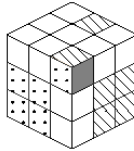
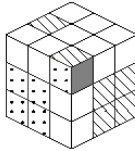
第 1 组：四种基本情况

			
(R U R')	y' (R' U' R) 或 F' U' F	y' U' (R' U R) 或 F R' F' R	U R U' R' 或 R' F R F'

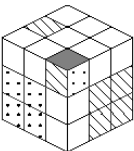
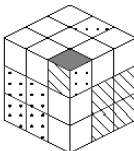
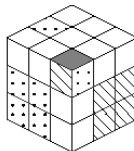
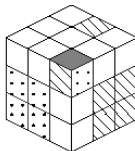
第 2 组六种情况：可转化为第 1 和第 2 种基本情况

			
U' (R U R' U) (R U R')	d (R' U2 R) d' (R U R')	U' (R U' R' U) (R U R')	
			
U y' (R' U' R U') (R' U' R)	U' (R U2' R') d (R' U' R)	d (R' U R U') (R' U' R)	

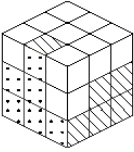
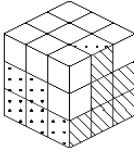
第 3 组四种情况：可转化为第 3 和第 4 种基本情况

			
U' (R U2' R') U2 (R U' R')	(U' R U R') U2 (R U' R')	d (R' U2 R) U2' (R' U R)	d (R' U' R) U2' (R' U R)

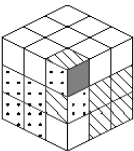
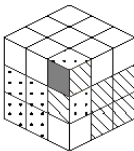
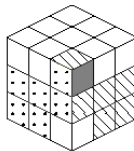
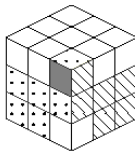
第 4 组四种情况：角棱都在顶层并分开，并且角块白色朝上

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

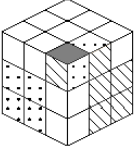
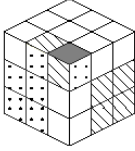
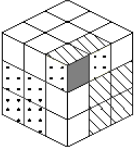
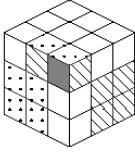
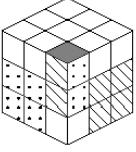
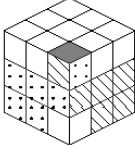
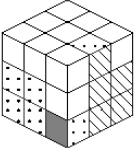
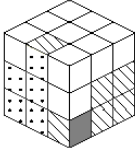
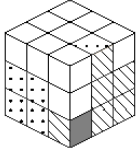
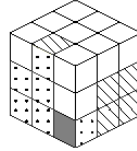
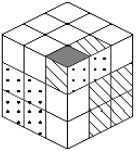
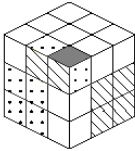
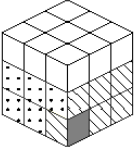
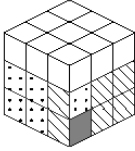
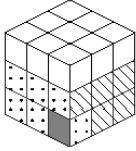
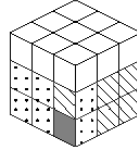
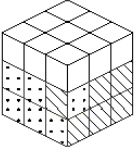
第 5 组两种情况：远切回回接孩子放学

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

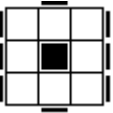
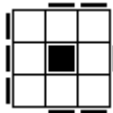
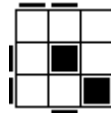
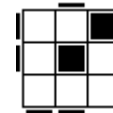
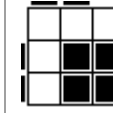
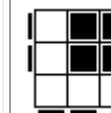
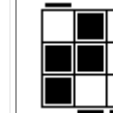
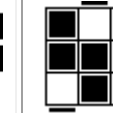
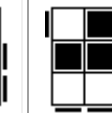
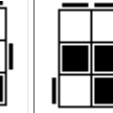
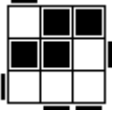
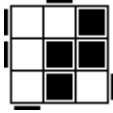
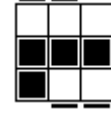
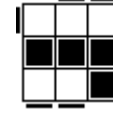
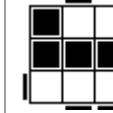
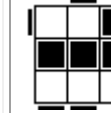
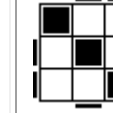

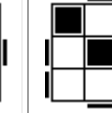
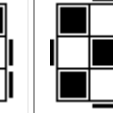
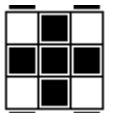
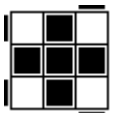
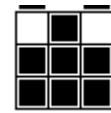
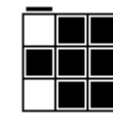
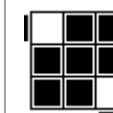
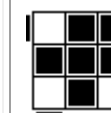
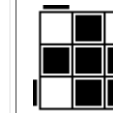

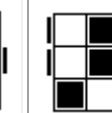
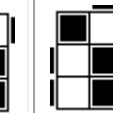
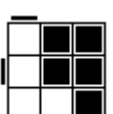
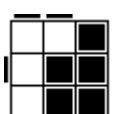
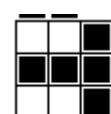

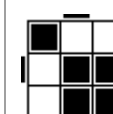
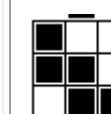
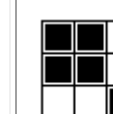
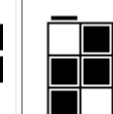
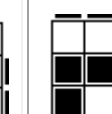
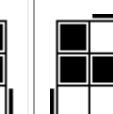
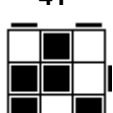
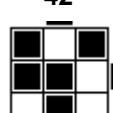
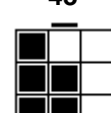
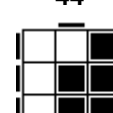
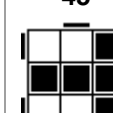
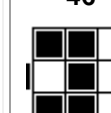
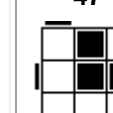
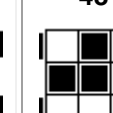
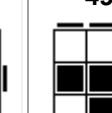
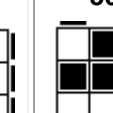
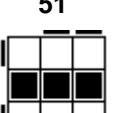
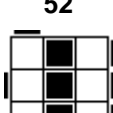
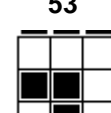
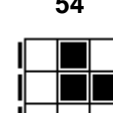
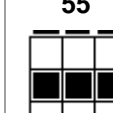
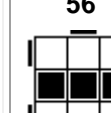
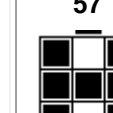
第 6 组四种情况：棱块在第二层，角块在顶层并且白色朝侧面

			
d (R' U' R) d' (R U R')	U' (R U R') d (R' U' R)	U' (R U2' R') U (R U R') 或 d (R' U R) U2 (R' U R)	(U' R U' R') U2 (R U' R')

第 7 组两种情况：藏棱、角块越过棱块头顶转 180°

			
$(R U2' R') U' (R U R')$	$y' (R' U2 R) U (R' U' R)$		
第 8 组两种情况：藏棱、角块越过棱块头顶转 90°			
			
$(R U' R' U) d (R' U' R)$	$y' (R' U R U') d' (R U R')$ 或 $M U L F' L' U' M'$		
第 9 组两种情况：角棱一上一下，并且角块白色朝上			
			
$(R U' R') d (R' U R)$	$(R U R' U')2 (R U R')$ 或 $(U R U' R')3$		
第 10 组四种情况：棱块在顶层，角块在底层且白色在侧面			
			
$(R U' R' U) (R U' R')$	$y' (R' U R) U' (R' U R)$ 或 $(R U R' U') (F R' F' R)$	$(R U R' U') (R U R')$	$y L' U' L U L' U' L$ 或 $y' (R' U' R U) (R' U' R)$
第 11 组两种情况：角棱在顶层挨着，并且侧面同色；角块白色朝上			
			
$(R U R') d (R' U R U')$ $(R' U R)$	$U2 R2 U2 (R' U' R U') R2$ 或 $(R U R' U') U' (R U R' U')$ $(R U R')$		
第 12 组五种情况：角棱对都在下面两层，并且在它们自己的槽位里			
			
$(R U' R' U) (R U2' R')$ $U (R U' R')$	$(R U' R' U) d (R' U' R U')$ $(R' U R)$	$(R U' R') U' (R U R')$ $U2 (R U' R')$	$(R U' R' U') (R U' R')$ $U (F' U' F)$
			
$(R U' U' R' U)2 y' (R' U' R)$			

按传统 OLL 公式顺序的 OLL 公式表

 1 $(R U' U')$ $(R2' F R$ $F') U2$ $(R' F R F')$	 2 $(F R U R'$ $U' F')$ $(f R U R'$ $U' f')$	 3 $(f R U R' U'$ $f') U' (F R$ $U R' U' F')$	 4 $(f R U R' U'$ $f') U (F$ $R U R'$ $U' F')$	 5 $(r' U2)$ $(R U R' U)$ r	 6 $(r U' U')$ $(R' U' R U'$ $r')$	 7 $r U$ $R' U R$ $U U r'$	 8 $r' U' R U'$ $R' U2 r$	 9 $(R U R' U')$ $(R' F)$ $(R2 U R'$ $U') F'$	 10 $(R U R' U)$ $(R' F R F')$ $(R U' U'$ $R')$
 11 $(r U R' U)$ $(R' F R F')$ $R U2 r'$	 12 $(F R U R'$ $U' F') U (F$ $R U R' U'$ $F')$	 13 $F (U R U')$ $(R2' F') (R$ $U R U' R')$	 14 $R' F (R U$ $R' F' R) y'$ $(R U' R')$	 15 $(l' U' l)$ $(L' U' L U)$ $(l' U l)$	 16 $(r U r')$ $(R U R' U')$ $(r U' r')$	 17 $(R U R' U)$ $(R' F R F')$ $U2$ $(R' F R F')$	 18 $F (R U R'$ $U) y' (R'$ $U2)$ $(R' F R F')$	 19 $(M_{\downarrow} U)$ $(R U R' U')$ M_{\uparrow} $(R' F R F')$	 20 $(r' R U)$ $(R U R' U')$ $(r2 R2')$ $(U R U' r')$
 21 $(R U U$ $R' U')$ $(R U R' U')$ $(R U' R')$	 22 $R U' U'$ $(R2' U')$ $(R2 U')$ $R2' U2 R$	 23 $(R2 D')$ $(R U' U')$ $(R' D)$ $(R U' U' R)$	 24 $(r U R' U')$ $(r' F R F')$	 25 F' $(r U R' U')$ $(r' F R)$	 26 $R U' U'$ $R' U'$ $R U' R'$	 27 $R' U2 R U$ $R' U R$	 28 $(r U R' U')$ $(r' R)$ $(U R U' R')$	 29 $(r U2 R'$ $U' R U' r')$ $(R' U2 R$ $U R' U R)$	 30 $(r' U2 R U$ $R' U r)$ $(R U2 R'$ $U' R U' R')$
 31 $(R' U' F)$ $(U R U')$ $(R' F' R)$	 32 $(R U)$ $(B' U')$ $(R' U R B$ $R')$	 33 $(R U R' U')$ $(R' F R F')$	 34 $(R U R' U')$ $x D'$ $(R' U R) E'$	 35 $R U' U'$ $(R2' F R$ $F') (R U' U'$ $R')$	 36 $(R' U' R$ $U') (R' U R$ $U)$ $(l U' R' U)$	 37 F $(R U' R' U')$ $(R U R' F')$	 38 $(R U R' U)$ $(R U' R'$ $U')$ $(R' F R F')$	 39 $L F'$ $(L' U' L U)$ $F (U' L')$	 40 $R' F$ $(R U R' U')$ $F' (U R)$
 41 $(R U R' U$ $R U2 R')$ $(F R U R'$ $U' F')$	 42 $(R' U' R U'$ $R' U2 R)$ $(F R U R'$ $U' F')$	 43 $B' U'$ $(R' U R B)$	 44 f $(R U R' U')$ f'	 45 F $(R U R' U')$ F'	 46 $(R' U')$ $(R' F R F')$ $(U R)$	 47 F' $(L' U' L$ $U)2 F$	 48 F $(R U R'$ $U')2$ F'	 49 $(R B')$ $(R2 F)$ $(R2 B)$ $(R2 F') R$	 50 $(R' F)$ $(R2 B')$ $(R2 F')$ $(R2 B) R'$
 51 f $(R U R' U')2$ f'	 52 $(R' U' R$ $U') (R' U)$ $y' (R' U R$ $B)$	 53 $r' U2$ $(R U R' U')$ $(R U R' U)$ r	 54 $r U$ $(R' U R U')2$ $U' r'$	 55 $R' F (U R$ $U') (R2' F')$ $(R2 U R'$ $U' R)$	 56 $(r U r')$ $(U R U' R')2$ $(r U' r')$	 57 $(R U R' U')$ $r R'$ $(U R U' r')$	<p>公式 34 里的 E' 的意思是：从上往下看时，顺时针转水平的中间层。国际规定 E 和 D 顺逆方向一致。</p>	<p>对标记有问题请到最后一页去看标记说明。</p>	

以下公式标记解释图为魔方吧小白同学原创，经过魔方小站部分修改。

魔方的某个面



U 上层作顺时针
90度转(即转
一下)



R 右面作顺时针
90度转(即转
一下)



F 前面作顺时针
90度转(即转
一下)



U' 上层作逆时针
90度转(即转
一下)



R' 右面作逆时针
90度转(即转
一下)



F' 前面作逆时针
90度转(即转
一下)



U2 上层作顺时针
180度转而逆
时针180度实
际结果与顺时
针是一样的!



R2 右面作顺时针
180度转而逆
时针180度实
际结果与顺时
针是一样的!



F2 前面作顺时针
180度转而逆
时针180度实
际结果与顺时
针是一样的!



D 底层作顺时针
90度转(即转
一下)



L 左面作顺时针
90度转(即转
一下)



B 后面作顺时针
90度转(即转
一下)



D' 底层作逆时针
90度转(即转
一下)



L' 左面作逆时针
90度转(即转
一下)



B' 后面作逆时针
90度转(即转
一下)



D2 底层作顺时针
180度转而逆
时针180度实
际结果与顺时
针是一样的!



L2 左面作顺时针
180度转而逆
时针180度实
际结果与顺时
针是一样的!



B2 后面作顺时针
180度转而逆
时针180度实
际结果与顺时
针是一样的!

整个魔方



x 整个魔方作
一个R方向
90度转



y 整个魔方作
一个U方向
90度转



z 整个魔方作
一个F方向
90度转



x' 整个魔方作
一个R'方向
90度转



y' 整个魔方作
一个U'方向
90度转



z' 整个魔方作
一个F'方向
90度转



x2 整个魔方作
一个R方向
180度转





















y2 整个魔方作
一个U'方向
180度转












z2 整个魔方作
一个F方向
180度转

魔方双层转

	u 上面两层作顺时针90度转(即转一下)		r 右面两层作顺时针90度转(即转一下)		f 前面两层作顺时针90度转(即转一下)
	u' 上面两层作逆时针90度转(即转一下)		r' 右面两层作逆时针90度转(即转一下)		f' 前面两层作逆时针90度转(即转一下)
	u2 上面两层作顺时针180度转而逆时针180度实际结果与顺时针是一样的!		r2 右面两层作顺时针180度转而逆时针180度实际结果与顺时针是一样的!		f2 前面两层作顺时针180度转而逆时针180度实际结果与顺时针是一样的!
	d 底面两层作顺时针90度转(即转一下)		l 左面两层作顺时针90度转(即转一下)		b 后面两层作顺时针90度转(即转一下)
	d' 底面两层作逆时针90度转(即转一下)		l' 左面两层作逆时针90度转(即转一下)		b' 后面两层作逆时针90度转(即转一下)
	d2 底面两层作顺时针180度转而逆时针180度实际结果与顺时针是一样的!		l2 左面两层作顺时针180度转而逆时针180度实际结果与顺时针是一样的!		b2 后面两层作顺时针180度转而逆时针180度实际结果与顺时针是一样的!

中间层

	E' 中间层做从上往下看的顺时针90°旋转。		M' 中层做向上一下的90°旋转		S 中层向F作顺时针90度转(即转一下)
	E 中间层做从上往下看的逆时针90°转。		M 中层做向下一下的90°旋转. 规定M和L的顺逆方向一致。		S' 中层作逆时针90度转(即转一下)
	E2 中间层做180°旋转。知所以 E' 是顺时针是因为规定 E 和 D 的顺逆方向是一致的。		M2 中层作顺时针180度转而逆时针180度实际结果与顺时针是一样的!		S2 中层作顺时针180度转而逆时针180度实际结果与顺时针是一样的!