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# Adj-BL



# Adj-FL

(3,2)/(1,0)/(0,-3)/(-1,0)/(-3,0)/(1,0)/(0,3)/(-1,0)/(0,-2)

(-5,3)/(2,-1)/(-2,1)/(-1,-1)/(3,0)/(-2,1)/(5,-3)



# Adj-FR



# Adj-BR

(-2,0)/(0,3)/(3,0)/(-1,-1)/(-2,1)/(0,-3)/(-4,0)

(-3,2)/(1,0)/(0,-3)/(-1,0)/(3,0)/(1,0)/(0,3)/(-1,0)/(0,-2)



# Opp-F



# Opp-LR

/(3,0)/(1,3)/(0,-1)/(0,1)/(-1,0)/(0,-3)/(-3,0)/

(0,-1)/(-3,0)/(4,1)/(-1,-1)/(-3,0)/(3,0)/(0,1)



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#### **Cw-Swirl**



#### **Ccw-Swirl**

(-3,-1)/(0,1)/(-3,0)/(0,-1)/(-2,1)/(-1,0)/(-3,0)/(1,0)/(-1,0)/(3,0)/(1,0)/(2,-1)/(0,1)/(3,0)/(0,-1)/(0,1)0)





(6,-1)/(4,1)/(2,-1)/(4,1)/(3,0)/(2,-1)/(-3,1)

(3,-1)/(-3,0)/(4,1)/(3,0)/(-4,-1)/(-3,0)/(3,0)/(4,1)/(5,0)





#### W-BR

(4,0)/(-4,-1)/(-3,0)/(3,0)/(4,1)/(-3,0)/(-4,-1)/(3,0)/(0,1)

(-5,0)/(-1,-4)/(-2,1)/(-1,-4)/(-3,0)/(1,-2)/(2,0)

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#### **Blocks-F+**



#### **Blocks-F-**

(-2,0)/(2,-1)/(0,-3)/(3,0)/(-3,0)/(-2,4)/(-1,0)

(3,-1)/(1,-2)/(0,3)/(0,-3)/(3,0)/(-4,2)/(0,1)



#### Blocks-R+



#### **Blocks-L-**

(1,0)/(-4,-4)/(3,0)/(0,-3)/(0,3)/(1,4)/(-4,-1)/(0,3)/(3,1)

(0,-1)/(4,4)/(-3,0)/(3,0)/(0,-3)/(-4,-1)/(4,1)/(-3,0)/(-4, 0)



# Square-C



### Square-D

(-5,-3)/(0,3)/(3,0)/(3,0)/(-4,-1)/(1,4)/(0,3)/(-4,-3)

(4,3)/(0,-3)/(-1,-4)/(4,1)/(-3,0)/(-3,0)/(0,-3)/(5,3)



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### **Opp Blocks**



#### **Opp Blocks**

(1,3)/(-4,2)/(1,-2)/(-1,-4)/(4,1)/(0,-3)/(-4,-1)/(3,1)

(6,2)/(-2,4)/(2,-1)/(1,4)/(-1,-4)/(0,3)/(1,4)/(-4,0)



# **Opp-Opp Blocks**



## **Opp-Opp Blocks**

(3,-1)/(3,0)/(1,4)/(2,-1)/(4,1)/(-3,0)/(-1,2)/(0,-3)/(-3,-5)

(-2,0)/(0,-3)/(-1,-4)/(1,-2)/(-4,-1)/(0,3)/(1,-2)/(3,0)/(2, 6)



### Fake T-perm



# **Opp-Fake T-perm**

(3,-1)/(-3,0)/(-2,1)/(-1,-1)/(0,3)/(0,-3)/(0,3)/(-3,0)/(3,-2)

(3,-1)/(1,-2)/(0,3)/(-1,-4)/(4,1)/(-4,-1)/(1,1)/(-1,2)/(0, 1)

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#### 2c-swap



### Line + Square

(4,0)/(-1,-1)/(3,0)/(-3,0)/(0,3)/(-3,0)/(3,0)/(4,-2)/(-4,0)

(0,-1)/(1,4)/(-1,-4)/(1,4)/(-4,-1)/(4,-2)/(-4,0)



# Line + Block



## 2c + H-perm

(0,-1)/(0,-3)/(1,4)/(-1,-4)/(4,1)/(-4,2)/(3,1)

(-3,-1)/(1,1)/(3,0)/(-4,-1)/(-3,3)/(1,-2)/(-1,2)/(-3,0)/(6, -2)



### Fake Rb-perm



## Fake Gb-perm (almost

(3,-4)/(0,3)/(3,0)/(4,1)/(-4,-1)/(1,4)/(-1,2)/(0,-2)

(6,-4)/(3,0)/(1,-2)/(-1,2)/(3,-3)/(3,0)/(0,-5)



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### **Fake Gc-perm**



## Fake Gd-perm

(1,0)/(0,3)/(-4,-1)/(4,-2)/(-3,0)/(0,3)/(-1,-3)

(1,3)/(0,-3)/(3,0)/(-4,2)/(4,1)/(0,-3)/(-1,0)



# 2 Blocks + opp line



# 2 Blocks + adj line

(6,-1)/(4,1)/(0,3)/(-4,-1)/(1,4)/(-1,2)/(4,-2)/(2,-3)

(-3,-1)/(4,-2)/(-3,0)/(0,3)/(0,-3)/(-1,2)/(0,1)



### 1-opp (a)



## 1-opp (b)

(1,0)/(0,-3)/(-1,2)/(-3,0)/(4,1)/(2,-1)/(1,4)/(3,0)/(-1,6)

(-2,3)/(-4,-1)/(1,-2)/(-1,-4)/(1,-2)/(3,3)/(-1,2)/(-2,1)/(5,-3)



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#### 2c-swap



#### Line + Block-R

(-2,0)/(2,-1)/(-3,3)/(3,0)/(0,-3)/(0,3)/(0,-3)/(1,1)/(2,0)

(-5,0)/(2,-4)/(4,1)/(-4,-1)/(1,4)/(-3,0)/(-4,0)



#### Line + Block-L



## 2c + H-perm

(6,-1)/(4,-2)/(-4,-1)/(1,4)/(-1,-4)/(0,3)/(3,1)

(6,-1)/(1,-2)/(-1,-1)/(4,1)/(-4,-1)/(1,4)/(0,-3)/(-1,2)/(3, 1)



#### 2 Blocks+



#### 2 Blocks-

(3,-1)/(0,-3)/(4,1)/(-1,-4)/(0,-3)/(0,3)/(-3,0)/(4,4)/(5,0)

(-2,0)/(3,0)/(-4,-1)/(4,1)/(0,3)/(-3,0)/(3,0)/(-4,-4)/(6,1)



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#### **Fake Ga-perm**



### Fake Gc-perm

(3,-1)/(0,-3)/(-3,3)/(-2,1)/(-1,2)/(0,-3)/(3,-2)

(-2,0)/(3,0)/(3,-3)/(-1,2)/(1,-2)/(3,0)/(-4,3)



## Opp line + block on



## Opp line + block on

(-2,3)/(-1,2)/(1,4)/(-4,-1)/(4,1)/(3,0)/(0,3)/(5,3)

(-3,2)/(1,-2)/(-1,-4)/(4,1)/(-4,-1)/(-3,0)/(0,-3)/(0,4)



### Opp-Opp Blocks +



### **Opp-Opp Blocks -**

(4,0)/(-1,2)/(-2,1)/(0,-3)/(-1,2)/(-2,1)/(2,-1)/(3,0)/(0,-2)

(0,2)/(-3,0)/(-2,1)/(2,-1)/(1,-2)/(0,3)/(2,-1)/(1,-2)/(-4, 0)



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#### 2c-swap



## Line + Square

(-3,-1)/(1,1)/(-3,0)/(0,3)/(0,-3)/(0,3)/(-3,0)/(2,-4)/(3,1)

(1,0)/(-4,-1)/(1,4)/(-4,-1)/(4,1)/(2,-4)/(3,1)



### Line + Block



2c + H-perm

(1,0)/(3,0)/(-1,-4)/(4,1)/(-4,-1)/(-2,4)/(-4,0)

(6,2)/(3,0)/(1,-2)/(-1,2)/(3,-3)/(4,1)/(-3,0)/(-1,-1)/(3,1)



### Fake Ra-perm



## Fake Ga-perm

(4,-3)/(0,-3)/(-3,0)/(-4,-1)/(4,1)/(-1,-4)/(1,-2)/(5,-3)

(0,-1)/(-3,0)/(4,1)/(2,-4)/(3,0)/(-3,0)/(0,4)



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## Fake Gb-perm



## Fake Gd-perm (almost

(6,2)/(0,3)/(-3,0)/(4,-2)/(-4,-1)/(0,3)/(6,-5)

(1,-3)/(-3,0)/(-1,2)/(1,-2)/(-3,3)/(-3,0)/(5,0)



## 2 Blocks + opp line



# 2 Blocks + adj line

(-5,0)/(-1,-4)/(0,-3)/(1,4)/(-1,-4)/(-2,1)/(2,-4)/(3,-2)

(4,0)/(2,-4)/(3,0)/(-3,0)/(0,3)/(-2,1)/(-1,0)



# 1-opp (a)



# 1-opp (b)

(0,-1)/(3,0)/(1,-2)/(0,3)/(-4,-1)/(1,-2)/(-1,-4)/(0,-3)/(0,-5)

(1,3)/(2,-1)/(1,-2)/(-3,-3)/(-1,2)/(1,4)/(-1,2)/(4,1)/(-4,-3)



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## Diag-Swap (a)



## Diag-Swap (b)

(4,0)/(-3,-3)/(-3,0)/(-3,0)/(3,0)/(-1,2)/(4,1)/(-4,-1)/(-3, 1)

(-3,-1)/(3,3)/(3,0)/(0,3)/(-3,0)/(-2,1)/(-4,-1)/(1,4)/(2,0)



#### **Blocks-F+**



#### **Blocks-F-**

(3,-1)/(-3,-2)/(-3,0)/(3,3)/(0,-3)/(3,2)/(-3,1)

(-2,0)/(2,3)/(0,-3)/(3,3)/(-3,0)/(-2,-3)/(2,0)



#### Blocks-R+



#### **Blocks-L-**

(4,0)/(0,3)/(-4,-1)/(1,-2)/(3,3)/(-1,-4)/(4,1)/(-4,-1)/(3, 1) (-3,-1)/(-3,0)/(4,1)/(2,-1)/(-3,-3)/(4,1)/(-4,-1)/(1,4)/(-4,0)



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#### Block-R+



#### Block-R-

(-5,3)/(2,-1)/(-2,1)/(-1,2)/(0,-3)/(0,3)/(-3,0)/(1,-2)/(-4, -3) (0,2)/(1,-2)/(-3,0)/(0,3)/(0,-3)/(-1,2)/(-2,1)/(2,-1)/(-3,-2)



#### Block-L+



#### **Block-L-**

(-5,3)/(-1,2)/(3,0)/(0,-3)/(0,3)/(1,-2)/(2,-1)/(-2,1)/(2,-3)

(0,2)/(-2,1)/(2,-1)/(1,-2)/(0,3)/(0,-3)/(3,0)/(-1,2)/(-3,-2)



## No Blocks (a)



## No Blocks (b)

(4,0)/(-4,0)/(0,3)/(-3,0)/(0,-2)/(0,2)/(3,0)/(0,-3)/(4,0)/(2,0)

(1,0)/(-3,0)/(2,-4)/(-2,1)/(2,-1)/(3,0)/(1,-2)/(-1,2)/(0,-5)