



Rotation	S_4 type	A_6 type/example	A_8 type/example	A_{12} type/example
Identity	(4,0,0,0)	(6, 0, 0,0,0)	(8, 0, ...)	(12, 0, ...)
		id	id	id
Along the x, y, z axes 90°	(0, 0, 0, 1)	(2,0,0,1,0,0)	(0, 0, 0, 2, ...)	(0, 0, 0, 3, ...)
		$(\epsilon, \beta, \iota, \delta)$	$(ABFE)(CGHD)$	$([EF][AE][BA][FB])$ $([CG][GH][HD][DC])$ $([GF][HE][DA][CB])$
Along the x, y, z axes 180°	(0, 2, 0, 0)	(2,2,0,0,0,0)	(0, 4, 0, ...)	(0, 6, 0, ...)
		$(\iota\epsilon)(\beta\delta)$	$(AF)(EB)(DG)(HC)$	$([HE][CB])([AD][FG])$ $([EF][AB])([EA][FB])$ $([CG][HD])([GH][CD])$
Centers of opposite edges 180°	(2, 1, 0, 0)	(0,3,0,0,0,0)	(0, 4, 0, ...)	(2, 5, 0, ...)
		$(\alpha\epsilon)(\delta\beta)(\iota\gamma)$	$(AB)(GH)(EC)(FD)$	$([GF][DA])([HE][CB])$ $([CD][EF])([HD][GC])$ $([EA][FB])$
Opposing vertices	(1, 0, 1, 0)	(0,0,2,0,0,0)	(2, 3, 0, ...)	(0, 0, 4, ...)
		$(\alpha\delta\epsilon)(\iota\gamma\beta)$	$(FD)(HB)(EC)$	$([AB][AE][AD])$ $([HG][GC][GF])$ $([EF][HD][CB])$ $([FB][EH][CD])$