

Cross-section 5

name	congruent to base piece with numbering			sum	bounding box	checkerboard coloring		mirror image to sum	
						sum of 3 - 4	sum of 2 - 5		
F1d					3 x 3 x 2	3 - 4		F1bd	
F1r		2	1		4 x 3 x 2	3 - 4		F1br	
F1u		4	3		4 x 3 x 2	3 - 4		F1bu	
F2u	N43b		5		4 x 3 x 2	3 - 4		F2bu	
F2l					3 x 3 x 2	3 - 4		F2bl	
F4u					3 x 3 x 2	3 - 4		F4bu	
F4l					4 x 3 x 2	3 - 4		F4bl	
F4d					3 x 3 x 2	3 - 4		F4bd	
F5l					3 x 3 x 2	3 - 4		F5bl	
F5d	N54b				4 x 3 x 2	3 - 4		F5bd	
F5r					3 x 3 x 2	3 - 4		F5br	
F3r					3 x 3 x 2	3 - 4		F3br	12
F1bd					3 x 3 x 2	3 - 4		F1d	
F1br					4 x 3 x 2	3 - 4		F1r	
F1bu					4 x 3 x 2	3 - 4		F1u	
F2bu	N34b				4 x 3 x 2	3 - 4		F2u	
F2bl					3 x 3 x 2	3 - 4		F2l	
F4bu					3 x 3 x 2	3 - 4		F4u	
F4bl					4 x 3 x 2	3 - 4		F4l	
F4bd					3 x 3 x 2	3 - 4		F4d	
F5bl					3 x 3 x 2	3 - 4		F5l	
F5bd	N45b				4 x 3 x 2	3 - 4		F5d	
F5br					3 x 3 x 2	3 - 4		F5r	
F3br				24	3 x 3 x 2	3 - 4		F3r	
F11					3 x 3 x 3	3 - 4		F1b1b	
F12					3 x 3 x 2	3 - 4		F1b2b	
F13					3 x 3 x 2	2 - 5		F1b3b	
F14					3 x 3 x 2	3 - 4		F1b4b	
F15					3 x 3 x 2	3 - 4		F1b5b	
F11b					3 x 3 x 3	2 - 5			
F12b					3 x 3 x 3	3 - 4		F21b	
F13b					3 x 3 x 3	2 - 5		F31b	
F14b					3 x 3 x 3	3 - 4		F41b	
F15b				10	3 x 3 x 3	3 - 4		F51b	9
F22	V32b				3 x 3 x 3	3 - 4		F2b2b	
F23	P31b				3 x 3 x 2	3 - 4		F2b3b	
F24					3 x 3 x 2	3 - 4		F2b4b	
F25	U32b				3 x 3 x 2	3 - 4		F2b5b	
F21b					3 x 3 x 3	3 - 4		F12b	
F22b	T24b				3 x 3 x 3	3 - 4			
F23b	F32b				3 x 3 x 3	3 - 4			
F24b					3 x 3 x 3	3 - 4		F42b	
F25b	Z23b			9	3 x 3 x 3	3 - 4		F52b	6
F33	T12b				3 x 3 x 3	3 - 4		F3b3b	
F34					3 x 3 x 2	3 - 4		F3b4b	
F35	P53b				3 x 3 x 2	3 - 4		F3b5b	
F31b					3 x 3 x 3	2 - 5		F13b	
F32b	F23b								
F33b	X13b				3 x 3 x 3	2 - 5			
F34b					3 x 3 x 3	3 - 4		F43b	
F35b	F35b			7	3 x 3 x 3	3 - 4		F53b	5

F44						3 x 3 x 3	3 - 4			F4b4b	
F45						3 x 3 x 2	3 - 4			F4b5b	
F41b						3 x 3 x 3	3 - 4			F14b	
F42b						3 x 3 x 3	3 - 4			F24b	
F43b						3 x 3 x 3	3 - 4			F34b	
F44b						3 x 3 x 3	3 - 4				
F45b					7	3 x 3 x 3	3 - 4			F54b	3
F55	V21b					3 x 3 x 3	3 - 4			F5b5b	
F51b						3 x 3 x 3	3 - 4			F15b	
F52b	Z34b					3 x 3 x 3	3 - 4			F25b	
F53b	F53b					3 x 3 x 3	3 - 4			F35b	
F54b						3 x 3 x 3	3 - 4			F45b	
F55b	T45b				6	3 x 3 x 3	3 - 4				1
F1b1b						3 x 3 x 3	3 - 4			F11	
F1b2b						3 x 3 x 2	3 - 4			F12	
F1b3b						3 x 3 x 2	2 - 5			F13	
F1b4b						3 x 3 x 2	3 - 4			F14	
F1b5b					5	3 x 3 x 2	3 - 4			F15	
F2b2b	V23b					3 x 3 x 3	3 - 4			F22	
F2b3b	P13b					3 x 3 x 2	3 - 4			F23	
F2b4b						3 x 3 x 2	3 - 4			F24	
F2b5b	U23b				4	3 x 3 x 2	3 - 4			F25	
F3b3b	T21b					3 x 3 x 3	3 - 4			F33	
F3b4b						3 x 3 x 2	3 - 4			F34	
F3b5b	P35b				3	3 x 3 x 2	3 - 4			F35	
F4b4b						3 x 3 x 3	3 - 4			F44	
F4b5b					2	3 x 3 x 2	3 - 4			F45	
F5b5b	V12b				1	3 x 3 x 3	3 - 4			F55	
					78			72	6		36
N1r						4 x 3 x 2	3 - 4			N1br	
N1u				1		5 x 2 x 2	3 - 4			N1bu	
N1l		3	2			4 x 2 x 2	3 - 4			N1bl	
N3u	N3bu	4				4 x 2 x 2	3 - 4				
N3l		5				4 x 3 x 2	3 - 4			N3bl	
N4l						4 x 3 x 2	3 - 4			N4bl	
N4r						4 x 2 x 2	3 - 4			N4br	
N5l						4 x 3 x 2	3 - 4			N5bl	
N5d	N5d					5 x 2 x 2	3 - 4			N5bd	
N5r						4 x 2 x 2	3 - 4			N5br	
N2d						4 x 2 x 2	3 - 4			N2bd	
N2r						4 x 3 x 2	3 - 4			N2br	
N1br						4 x 3 x 2	3 - 4			N1r	
N1bu						5 x 2 x 2	3 - 4			N1u	
N1bl						4 x 2 x 2	3 - 4			N1l	
N3bu	N3u										
N3bl						4 x 3 x 2	3 - 4			N3l	
N4bl						4 x 3 x 2	3 - 4			N4l	
N4br						4 x 2 x 2	3 - 4			N4r	
N5bl						4 x 3 x 2	3 - 4			N5l	
N5bd	N5bd					5 x 2 x 2	3 - 4			N5d	
N5br						4 x 2 x 2	3 - 4			N5r	
N2bd						4 x 2 x 2	3 - 4			N2d	

N2br				23	4 x 3 x 2	3 - 4			N2r	11
N11					4 x 3 x 2	3 - 4			N1b1b	
N12					4 x 2 x 2	3 - 4			N1b2b	
N13					4 x 2 x 2	3 - 4			N1b3b	
N14					4 x 2 x 2	3 - 4			N1b4b	
N15					4 x 2 x 2	3 - 4			N1b5b	
N11b					4 x 3 x 2	3 - 4				
N12b					4 x 3 x 2	3 - 4			N21b	
N13b					4 x 3 x 2	3 - 4			N31b	
N14b					4 x 3 x 2	3 - 4			N41b	
N15b				10	4 x 3 x 2	3 - 4			N51b	9
N22					4 x 3 x 2	3 - 4			N2b2b	
N23					4 x 2 x 2	3 - 4			N2b3b	
N24					4 x 2 x 2	2 - 5			N2b4b	
N25					4 x 2 x 2	3 - 4			N2b5b	
N21b					4 x 3 x 2	3 - 4			N12b	
N22b					4 x 3 x 2	2 - 5				
N23b					4 x 3 x 2	3 - 4			N32b	
N24b					4 x 3 x 2	2 - 5			N42b	
N25b				9	4 x 3 x 2	3 - 4			N52b	7
N33	V3d				4 x 3 x 2	3 - 4			N3b3b	
N34	P1bu				4 x 2 x 2	3 - 4			N3b4b	
N35	U4r				4 x 2 x 2	3 - 4			N3b5b	
N31b					4 x 3 x 2	3 - 4			N13b	
N32b					4 x 3 x 2	3 - 4			N23b	
N33b	T2u				4 x 3 x 2	3 - 4				
N34b	F2bu									
N35b	Z2u			7	4 x 3 x 2	3 - 4			N53b	4
N44	T1l				4 x 3 x 2	3 - 4			N4b4b	
N45	P5d				4 x 2 x 2	3 - 4			N4b5b	
N41b					4 x 3 x 2	3 - 4			N14b	
N42b					4 x 3 x 2	2 - 5			N24b	
N43b	F2u									
N44b	X1u				4 x 3 x 2	2 - 5				
N45b	F5bd			5						2
N55	V5r				4 x 3 x 2	3 - 4			N5b5b	
N51b					4 x 3 x 2	3 - 4			N15b	
N52b					4 x 3 x 2	3 - 4			N25b	
N53b	Z2bu				4 x 3 x 2	3 - 4			N35b	
N54b	F5d									
N55b	T5d			5	4 x 3 x 2	3 - 4				1
N1b1b					4 x 3 x 2	3 - 4			N11	
N1b2b					4 x 2 x 2	3 - 4			N12	
N1b3b					4 x 2 x 2	3 - 4			N13	
N1b4b					4 x 2 x 2	3 - 4			N14	
N1b5b				5	4 x 2 x 2	3 - 4			N15	
N2b2b					4 x 3 x 2	3 - 4			N22	
N2b3b					4 x 2 x 2	3 - 4			N23	
N2b4b					4 x 2 x 2	2 - 5			N24	
N2b5b				4	4 x 2 x 2	3 - 4			N25	
N3b3b	V3l				4 x 3 x 2	3 - 4			N33	
N3b4b	P1u				4 x 2 x 2	3 - 4			N34	
N3b5b	U2l			3	4 x 2 x 2	3 - 4			N35	
N4b4b	T3r				4 x 3 x 2	3 - 4			N44	
N4b5b	P5bd			2	4 x 2 x 2	3 - 4			N45	
N5b5b	V1u			1	4 x 3 x 2	3 - 4			N55	
				74			68	6		34

P1u	N3b4b											
P1l		1	2				$3 \times 3 \times 2$	3 - 4			P1bl	
P3l		3	4				$3 \times 3 \times 2$	3 - 4			P3bl	
P5l		5					$3 \times 3 \times 2$	3 - 4			P5bl	
P5d	N45											
P5r							$3 \times 2 \times 2$	3 - 4			P5br	
P4d							$3 \times 2 \times 2$	3 - 4			P4bd	
P4r							$3 \times 3 \times 2$	3 - 4			P4br	
P2r							$3 \times 3 \times 2$	3 - 4			P2br	
P2u							$4 \times 2 \times 2$	3 - 4			P2bu	
P1bu	N34											
P1bl							$3 \times 3 \times 2$	3 - 4			P1l	
P3bl							$3 \times 3 \times 2$	3 - 4			P3l	
P5bl							$3 \times 3 \times 2$	3 - 4			P5l	
P5bd	N4b5b											
P5br							$3 \times 2 \times 2$	3 - 4			P5r	
P4bd							$3 \times 2 \times 2$	3 - 4			P4d	
P4br							$3 \times 3 \times 2$	3 - 4			P4r	
P2br							$3 \times 3 \times 2$	3 - 4			P2r	
P2bu					16		$4 \times 2 \times 2$	3 - 4			P2u	8
P11	V23						$3 \times 3 \times 2$	3 - 4			P1b1b	
P12							$3 \times 2 \times 2$	3 - 4			P1b2b	
P13	P1b3b						$3 \times 2 \times 2$	3 - 4				
P14							$3 \times 2 \times 2$	3 - 4			P1b4b	
P15	U34						$3 \times 2 \times 2$	3 - 4			P1b5b	
P11b	T24						$3 \times 3 \times 2$	3 - 4				
P12b							$3 \times 3 \times 2$	3 - 4			P21b	
P13b	F2b3b											
P14b							$3 \times 3 \times 2$	3 - 4			P41b	
P15b	Z23				9		$3 \times 3 \times 2$	3 - 4			P51b	7
P22							$3 \times 3 \times 2$	3 - 4			P2b2b	
P23							$3 \times 2 \times 2$	2 - 5			P2b3b	
P24							$3 \times 2 \times 2$	3 - 4			P2b4b	
P25							$3 \times 2 \times 2$	3 - 4			P2b5b	
P21b							$3 \times 3 \times 2$	3 - 4			P12b	
P22b							$3 \times 3 \times 2$	2 - 5				
P23b							$3 \times 3 \times 2$	2 - 5			P32b	
P24b							$3 \times 3 \times 2$	3 - 4			P42b	
P25b					9		$3 \times 3 \times 2$	3 - 4			P52b	7
P33	T12						$3 \times 3 \times 2$	3 - 4			P3b3b	
P34							$3 \times 2 \times 2$	3 - 4			P3b4b	
P35	P35						$3 \times 2 \times 2$	3 - 4			P3b5b	
P31b	F23											
P32b							$3 \times 3 \times 2$	2 - 5			P23b	
P33b	X13						$3 \times 3 \times 2$	2 - 5				
P34b							$3 \times 3 \times 2$	3 - 4			P43b	
P35b	F3b5b				6							4
P44							$3 \times 3 \times 2$	3 - 4			P4b4b	
P45							$3 \times 2 \times 2$	3 - 4			P4b5b	
P41b							$3 \times 3 \times 2$	3 - 4			P14b	
P42b							$3 \times 3 \times 2$	3 - 4			P24b	
P43b							$3 \times 3 \times 2$	3 - 4			P34b	
P44b							$3 \times 3 \times 2$	3 - 4				
P45b					7		$3 \times 3 \times 2$	3 - 4			P54b	3
P55	V45						$3 \times 3 \times 2$	3 - 4			P5b5b	
P51b	Z2b3b						$3 \times 3 \times 2$	3 - 4			P15b	
P52b							$3 \times 3 \times 2$	3 - 4			P25b	
P53b	F35											

P54b						3 x 3 x 2	3 - 4			P45b	
P55b	T45				5	3 x 3 x 2	3 - 4				1
P1b1b	V34					3 x 3 x 2	3 - 4			P11	
P1b2b						3 x 2 x 2	3 - 4			P12	
P1b3b	P13										
P1b4b						3 x 2 x 2	3 - 4			P14	
P1b5b	U23				4	3 x 2 x 2	3 - 4			P15	
P2b2b						3 x 3 x 2	3 - 4			P22	
P2b3b						3 x 2 x 2	2 - 5			P23	
P2b4b						3 x 2 x 2	3 - 4			P24	
P2b5b					4	3 x 2 x 2	3 - 4			P25	
P3b3b	T23					3 x 3 x 2	3 - 4			P33	
P3b4b						3 x 2 x 2	3 - 4			P34	
P3b5b	P3b5b				3	3 x 2 x 2	3 - 4			P35	
P4b4b						3 x 3 x 2	3 - 4			P44	
P4b5b					2	3 x 2 x 2	3 - 4			P45	
P5b5b	V12				1	3 x 3 x 2	3 - 4			P55	
					66			60	6		30
Z1u						4 x 3 x 2	3 - 4			Z1bu	
Z1l		1	2			4 x 3 x 2	3 - 4			Z1bl	
Z1d			3			3 x 3 x 2	3 - 4			Z1bd	
Z3l			4	5		3 x 3 x 2	3 - 4			Z3bl	
Z2r						3 x 3 x 2	3 - 4			Z2br	
Z2u	N35b										
Z1bu						4 x 3 x 2	3 - 4			Z1u	
Z1bl						4 x 3 x 2	3 - 4			Z1l	
Z1bd						3 x 3 x 2	3 - 4			Z1d	
Z3bl						3 x 3 x 2	3 - 4			Z3l	
Z2br						3 x 3 x 2	3 - 4			Z2r	
Z2bu	N53b				10						5
Z11	Z55					3 x 3 x 3	3 - 4			Z1b1b	
Z12	Z45					3 x 3 x 2	3 - 4			Z1b2b	
Z13	Z35					3 x 3 x 2	3 - 4			Z1b3b	
Z14	Z25					3 x 3 x 2	3 - 4			Z1b4b	
Z15						3 x 3 x 2	3 - 4			Z1b5b	
Z11b	Z55b					3 x 3 x 3	3 - 4				
Z12b	Z54b					3 x 3 x 3	3 - 4			Z21b	
Z13b	Z53b					3 x 3 x 3	3 - 4			Z31b	
Z14b	Z52b					3 x 3 x 3	3 - 4			Z41b	
Z15b	Z51b				10	3 x 3 x 3	3 - 4				8
Z22	V13b					3 x 3 x 3	3 - 4			Z2b2b	
Z23	P15b										
Z24	U24b					3 x 3 x 2	2 - 5			Z2b4b	
Z25	Z14										
Z21b						3 x 3 x 3	3 - 4			Z12b	
Z22b	T15b					3 x 3 x 3	2 - 5				
Z23b	F25b										
Z24b	Z42b					3 x 3 x 3	2 - 5				
Z25b	Z41b				6	3 x 3 x 3	3 - 4			Z14b	2
Z33	T31b					3 x 3 x 3	3 - 4			Z3b3b	
Z34	P15b										
Z35	Z13					3 x 3 x 2	2 - 5				
Z31b						3 x 3 x 3	3 - 4			Z13b	
Z32b	F52b										
Z33b	X15b					3 x 3 x 3	3 - 4				
Z34b	Z32b										
Z35b	Z31b				3						1
Z44	Z22										

Z45	Z12											
Z41b	Z25b											
Z42b	Z24b											
Z43b	Z23b											
Z44b	Z22b											
Z45b	Z21b				0							
Z55	Z11											
Z51b	Z15b											
Z52b	Z14b											
Z53b	Z13b											
Z54b	Z12b											
Z55b	Z11b				0							
Z1b1b						3 x 3 x 3	3 - 4				Z11	
Z1b2b						3 x 3 x 2	3 - 4				Z12	
Z1b3b						3 x 3 x 2	3 - 4				Z13	
Z1b4b						3 x 3 x 2	3 - 4				Z14	
Z1b5b					5	3 x 3 x 2	3 - 4				Z15	
Z2b2b	V31b					3 x 3 x 3	3 - 4				Z22	
Z2b3b	P51b											
Z2b4b	U42b					3 x 3 x 2	2 - 5				Z24	
Z2b5b	Z1b2b				2							
Z3b3b	T13b					3 x 3 x 3	3 - 4				Z33	
Z3b4b	Z2b3b											
Z3b5b	Z1b3b				1							
Z4b4b	Z2b2b											
Z4b5b	Z1b2b				0							
Z5b5b	Z1b1b				0							
					37				32	5		16

U1r		1		5		$3 \times 2 \times 2$	3 - 4			U5l	
U1u		2	3	4		$3 \times 3 \times 2$	3 - 4			U5u	
U1l						$4 \times 2 \times 2$	3 - 4			U5r	
U2l	N3b5b										
U2d						$3 \times 3 \times 2$	3 - 4			U4d	
U3d						$3 \times 3 \times 2$	3 - 4				
U4d						$3 \times 3 \times 2$	3 - 4			U2d	
U4r	N35										
U5r						$4 \times 2 \times 2$	3 - 4			U1l	
U5u						$3 \times 3 \times 2$	3 - 4			U1u	
U5l						$3 \times 2 \times 2$	3 - 4			U1r	
U3u					10	$3 \times 2 \times 2$	3 - 4				4
U11						$3 \times 3 \times 2$	3 - 4			U55	
U12						$3 \times 2 \times 2$	3 - 4			U45	
U13						$3 \times 2 \times 2$	3 - 4			U35	
U14						$3 \times 2 \times 2$	3 - 4			U25	
U15						$3 \times 2 \times 2$	3 - 4				
U11b	U55b					$3 \times 3 \times 2$	3 - 4				
U12b						$3 \times 3 \times 2$	3 - 4			U21b	
U13b						$3 \times 3 \times 2$	3 - 4			U31b	
U14b						$3 \times 3 \times 2$	3 - 4			U41b	
U15b	U15b				10	$3 \times 3 \times 2$	3 - 4			U51b	8
U22	V13					$3 \times 3 \times 2$	3 - 4			U44	
U23	P1b5b										
U24	U24					$3 \times 2 \times 2$	2 - 5				
U25						$3 \times 2 \times 2$	3 - 4			U14	
U21b						$3 \times 3 \times 2$	3 - 4			U12b	
U22b	T25					$3 \times 3 \times 2$	2 - 5				
U23b	F2b5b										
U24b	Z24										
U25b	U14b				5						1
U33	T13					$3 \times 3 \times 2$	3 - 4				
U34	P15										
U35						$3 \times 2 \times 2$	3 - 4			U13	
U31b						$3 \times 3 \times 2$	3 - 4			U13b	
U32b	F25										
U33b	X15					$3 \times 3 \times 2$	3 - 4				
U34b	U23b										
U35b	U13b				4						
U44	V35					$3 \times 3 \times 2$	3 - 4			U22	
U45						$3 \times 2 \times 2$	3 - 4			U12	
U41b						$3 \times 3 \times 2$	3 - 4			U14b	
U42b	Z2b4b										
U43b	U32b										
U44b	U22b										
U45b	U12b				3						
U55						$3 \times 3 \times 2$	3 - 4			U11	
U51b	U51b					$3 \times 3 \times 2$	3 - 4			U15b	
U52b	U41b										
U53b	U31b										
U54b	U21b										
U55b	U11b				2						
					34				32	2	13

T1u		1	2	3		4 x 3 x 2	3 - 4			T3u	
T1l	N44		4								
T1d			5			3 x 3 x 2	3 - 4			T3d	
T4l						3 x 3 x 2	3 - 4			T4r	
T5l						3 x 3 x 2	3 - 4			T5r	
T5d	N55b										
T5r						3 x 3 x 2	3 - 4			T5l	
T4r						3 x 3 x 2	3 - 4			T4l	
T3d						3 x 3 x 2	3 - 4			T1d	
T3r	N4b4b										
T3u						4 x 3 x 2	3 - 4			T1u	
T2u	N33b				8						4
T11	V44					3 x 3 x 3	3 - 4			T33	
T12	P33										
T13	U33										
T14						3 x 3 x 2	3 - 4			T34	
T15						3 x 3 x 2	3 - 4			T35	
T11b	T44					3 x 3 x 3	3 - 4				
T12b	F33										
T13b	Z33										
T14b						3 x 3 x 3	3 - 4			T34b	
T15b					6	3 x 3 x 3	3 - 4			T35b	5
T22	V33b					3 x 3 x 3	3 - 4				
T23	P3b3b										
T24	P11b										
T25	U22b										
T21b	F3b3b										
T22b	X33					3 x 3 x 3	2 - 5				
T23b	T12b										
T24b	F22b										
T25b	Z22b				2						
T33	V22					3 x 3 x 3	3 - 4			T11	
T34						3 x 3 x 2	3 - 4			T14	
T35						3 x 3 x 2	3 - 4			T15	
T31b	T13b										
T32b	T21b										
T33b	T11b										
T34b						3 x 3 x 3	3 - 4			T14b	
T35b					5	3 x 3 x 3	3 - 4			T15b	
T44	T11b										
T45	P55b										
T41b	T34b										
T42b	T24b										
T43b	T14b										
T44b	X11b					3 x 3 x 3	3 - 4				
T45b	F55b				1						
T55	V11b					3 x 3 x 3	3 - 4				
T51b	T35b										
T52b	T25b										
T53b	T15b										
T54b	F5b										
T55b	T55b				2	3 x 3 x 3	2 - 5				
					24			22	2		9
V1r						3 x 3 x 2	3 - 4			V5u	
V1u	N5b5b	1									
V1l		2				4 x 3 x 2	3 - 4			V5d	
V2l		3	4	5		4 x 3 x 2	3 - 4			V4d	
V3l	N3b3b										

V3d	N33											
V4d						4 x 3 x 2	3 - 4				V2l	
V5d						4 x 3 x 2	3 - 4				V1l	
V5r	N55											
V5u						3 x 3 x 2	3 - 4				V1r	
V4u						3 x 3 x 2	3 - 4				V2r	
V2r					8	3 x 3 x 2	3 - 4				V4u	4
V11	V11					3 x 3 x 3	3 - 4				V55	
V12	P5b5b											
V13	U4b4b											
V14						3 x 3 x 2	3 - 4				V25	
V15						3 x 3 x 2	3 - 4					
V11b	T55											
V12b	F5b5b											
V13b	Z44											
V14b	V25b					3 x 3 x 3	3 - 4				V41b	
V15b	V15b				5	3 x 3 x 3	3 - 4				V51b	4
V22	T33											
V23	P11											
V24	V24					3 x 3 x 2	2 - 5					
V25						3 x 3 x 2	3 - 4				V14	
V21b	F55											
V22b	X11					3 x 3 x 3	2 - 5					
V23b	F2b2b											
V24b	V24b					3 x 3 x 3	2 - 5				V42b	
V25b	V14b				4							1
V33	V33					3 x 3 x 3	3 - 4					
V34	P1b1b											
V35	U44											
V31b	Z2b2b											
V32b	F22											
V33b	T22											
V34b	V23b											
V35b	V13b				1							
V44	T11											
V45	P55											
V41b	V52b					3 x 3 x 3	3 - 4				V14b	
V42b	V42b					3 x 3 x 3	2 - 5				V24b	
V43b	V32b											
V44b	V22b											
V45b	V12b				2							
V55	V55					3 x 3 x 3	3 - 4				V11	
V51b	V51b					3 x 3 x 3	3 - 4				V15b	
V52b	V41b											
V53b	V31b											
V54b	V21b											
V55b	V11b				2							
					22			18	4			9
X1r						3 x 3 x 2	2 - 5				X1l	
X1u	N44b		1									
X1l		2	3	4	2	3 x 3 x 2	2 - 5				X1r	1
X11	V22b		5									
X12	X14					3 x 3 x 2	3 - 4					
X13	P33b											
X14	X12											
X15	U33b											
X11b	T44b											
X12b						3 x 3 x 3	3 - 4				X14b	

X13b	F33b											
X14b					3	3 x 3 x 3	3 - 4				X12b	
X15b	Z33b											1
X33b	X33b				1	3 x 3 x 3	1 - 6					
					6			3	2			2
W1r						3 x 3 x 2	3 - 4				W5u	
W1u		1				4 x 3 x 2	3 - 4				W5r	
W1l		2	3			4 x 3 x 2	3 - 4				W5d	
W2l			4	5		4 x 3 x 2	3 - 4				W4d	
W2d						3 x 3 x 2	3 - 4				W4l	
W4l						3 x 3 x 2	3 - 4				W2d	
W4d						4 x 3 x 2	3 - 4				W2l	
W5d						4 x 3 x 2	3 - 4				W1l	
W5r						4 x 3 x 2	3 - 4				W1u	
W5u						3 x 3 x 2	3 - 4				W1r	
W3r						3 x 3 x 2	3 - 4				W3u	
W3u					12	3 x 3 x 2	3 - 4				W3r	6
W11						3 x 3 x 3	3 - 4				W55	
W12						3 x 3 x 2	3 - 4				W45	
W13						3 x 3 x 2	3 - 4				W35	
W14						3 x 3 x 2	3 - 4				W25	
W15						3 x 3 x 2	3 - 4					
W11b						3 x 3 x 3	3 - 4					
W12b	W45b					3 x 3 x 3	3 - 4				W21b	
W13b	W35b					3 x 3 x 3	3 - 4				W31b	
W14b	W25b					3 x 3 x 3	3 - 4				W41b	
W15b	W15b				10	3 x 3 x 3	3 - 4				W51b	8
W22						3 x 3 x 3	3 - 4				W44	
W23						3 x 3 x 2	3 - 4				W34	
W24						3 x 3 x 2	2 - 5					
W25						3 x 3 x 2	3 - 4				W14	
W21b	W54b					3 x 3 x 3	3 - 4				W12b	
W22b	W44b					3 x 3 x 3	2 - 5					
W23b	W34b					3 x 3 x 3	3 - 4				W32b	
W24b	W24b					3 x 3 x 3	2 - 5				W42b	
W25b	W14b				8							4
W33						3 x 3 x 3	3 - 4					
W34						3 x 3 x 2	3 - 4				W23	
W35						3 x 3 x 2	3 - 4				W13	
W31b	W53b					3 x 3 x 3	3 - 4				W13b	
W32b	W43b					3 x 3 x 3	3 - 4				W23b	
W33b	W33b					3 x 3 x 3	3 - 4					
W34b	W23b											
W35b	W13b				6							
W44						3 x 3 x 3	3 - 4				W22	
W45						3 x 3 x 2	3 - 4				W12	
W41b	W52b					3 x 3 x 3	3 - 4				W14b	
W42b	W42b					3 x 3 x 3	2 - 5				W24b	
W43b	W32b											
W44b	W22b											
W45b	W12b				4							
W55						3 x 3 x 3	3 - 4				W11	
W51b	W51b					3 x 3 x 3	3 - 4				W15b	
W52b	W41b											
W53b	W31b											
W54b	W21b											
W55b	W11b				2							
					42			38	4			18

Y1r	L53b					4 x 3 x 2	3 - 4			Y1br	
Y1u	Q(6)		1								
Y1l	L3b5b	2	3			4 x 2 x 2	3 - 4			Y1bl	
Y2u			4			4 x 2 x 2	3 - 4			Y2bu	
Y2l			5			4 x 3 x 2	3 - 4			Y2bl	
Y2d						4 x 2 x 2	3 - 4			Y2bd	
Y4l	Y24					4 x 2 x 2	3 - 4			Y4bl	
Y5l	L25					4 x 2 x 2	3 - 4			Y5bl	
Y5d	Q(6)										
Y5r	L25b					4 x 3 x 2	3 - 4			Y5br	
Y4r	Y42b					4 x 3 x 2	3 - 4			Y4br	
Y3r	Y23b					4 x 3 x 2	3 - 4			Y3br	
Y1br	L35b					4 x 3 x 2	3 - 4			Y1r	
Y1bu	Q(6)										
Y1bl	L35					4 x 2 x 2	3 - 4			Y1l	
Y2bu						4 x 2 x 2	3 - 4			Y2u	
Y2bl						4 x 3 x 2	3 - 4			Y2l	
Y2bd						4 x 2 x 2	3 - 4			Y2d	
Y4bl	Y2b4b					4 x 2 x 2	3 - 4			Y4l	
Y5bl	L2b5b					4 x 2 x 2	3 - 4			Y5l	
Y5bd	Q(6)										
Y5br	L52b					4 x 3 x 2	3 - 4			Y5r	
Y4br	Y24b					4 x 3 x 2	3 - 4			Y4r	
Y3br	Y32b				20	4 x 3 x 2	3 - 4			Y3r	10
Y12	L3br					4 x 2 x 2	3 - 4			Y1b2b	
Y12b	L3bl				2	4 x 3 x 2	3 - 4			Y21b	2
Y22						4 x 3 x 2	3 - 4			Y2b2b	
Y23	Y2b3b					4 x 2 x 2	3 - 4				
Y24	Y4l										
Y25	L2r					4 x 2 x 2	3 - 4			Y2b5b	
Y21b	L3l					4 x 3 x 2	3 - 4			Y12b	
Y22b						4 x 3 x 2	3 - 4				
Y23b	Y3r										
Y24b	Y4br										
Y25b	L2bl				6	4 x 3 x 2	3 - 4			Y52b	3
Y32b	Y3br										
Y42b	Y4r										
Y52b	L2l				1	4 x 3 x 2	3 - 4			Y25b	
Y1b2b	L3r					4 x 2 x 2	3 - 4			Y12	
Y2b2b						4 x 3 x 2	3 - 4			Y22	
Y2b3b	Y23										
Y2b4b	Y4bl										
Y2b5b	L2br				3	4 x 2 x 2	3 - 4			Y25	
					32				32	0	15
L1r	L15					4 x 2 x 2	3 - 4			L1br	
L1u	Q(6)		1								
L1l	L15b		2			4 x 3 x 2	3 - 4			L1bl	
L2l	Y52b		3								
L3l	Y21b		4	5							
L4l	L54b					4 x 3 x 2	3 - 4			L4bl	
L4d	Q(6)										
L5d						5 x 2 x 2	3 - 4			L5bd	
L5r						4 x 3 x 2	3 - 4			L5br	
L5u						4 x 2 x 2	3 - 4			L5bu	
L3r	Y1b2b										
L2r	Y25										
L1br	L1b5b					4 x 2 x 2	3 - 4			L1r	
L1bu	Q(6)										

L1bl	L51b				4 x 3 x 2	3 - 4			L1l	
L2bl	Y25b									
L3bl	Y12b									
L4bl	L45b				4 x 3 x 2	3 - 4			L4l	
L4bd	Q(6)									
L5bd					5 x 2 x 2	3 - 4			L5d	
L5br					4 x 3 x 2	3 - 4			L5r	
L5bu					4 x 2 x 2	3 - 4			L5u	
L3br	Y12									
L2br	Y2b5b			12						6
L15	L1r									
L25	Y5l									
L35	Y1bl									
L45	L4b5b				4 x 2 x 2	3 - 4				
L55				2	4 x 3 x 2	3 - 4			L5b5b	
L51b	L1bl									
L52b	Y5br									
L53b	Y1r									
L54b	L4l									
L55b				1	4 x 3 x 2	3 - 4				
L15b	L1l									
L25b	Y5r									
L35b	Y1br									
L45b	L4bl									
L1b5b	L1br									
L2b5b	Y5bl									
L3b5b	Y1l									
L4b5b	L45									
L5b5b				1	4 x 3 x 2	3 - 4			L55	1
				16			16	0		7
total sums				431			393	37	0	189