Cheetsheet Page 1

cheetsh	eet						
Project	ive	plan	e (ordeı)	Affine pla	ne (order n)
n	v	b	r	k I		n v	b r kl
2:	7	7	3	3 1		2: 4	6 3 21
3:	13	13	4	4 1		3: 9	12 4 31
				5 1			20 5 41
				6 1			30 6 51
				8 1			56 8 71
							72 9 81
				9 1			
				10 1			90 10 91
11:							132 12 111
13:	183	183	14	14 1		13: 169	182 14 131
		ubse					ubsets
				1			r k l
2	1	1	2	1	8 1 1 8 1 21 1	1 21 1 35 1	1 35 1
3	3	2	2	1	9 9 8 8 7 22 22	21 21 20 36 36	35 35 34
4	6	3	2	1	10 45 36 8 28 23 253 2	31 21 210 37 666 6	30 35 595
5	10	4	2	1			
	15	5		1	12 495 330 8 210		
	21	6					
	28	7				ubsets 36-s	ubsets
	36	8	2				r k l
	45	9	2				
	55		2			1 22 1 36 1	
	66		2		23 23		
	78		2				666 36 630
	91		2		10 10 3 3 0		
	105			1	11 55 45 9 36		
16	120	15	2	1	12 220 165 9 120		
17	136	16	2	1	13 715 495 9 330 23-s		ubsets
18	153	17	2	1	v b	r k 1 v b	r k l
19	171	18	2	1			
20	190	19	2	1	23 1	1 23 1 37 1	1 37 1
21	210	20	2	1	10-subsets 24 24	23 23 22 38 38	37 37 36
22	231	21	2	1	v b r k l 25 300 2	76 23 253 39 741 7	03 37 666
23	253	22	2	1			
24	276	23	2	1	10 1 1 10 1		
25	300	24	2	1	11 11 10 10 9		
26	325	25	2	1	12 66 55 10 45 24-s	ubsets 38-s	ubsets
27	351	26	2	1	13 286 220 10 165 v b	r k l v b	r k l
28	378	27	2	1			
		28	2	1	24 1	1 24 1 38 1	1 38 1
		29		1		24 24 23 39 39	
		30					41 38 703
		31	2				
					V D r K 1		
		32		1			
		33					
		34			12 12 11 11 10 25-s		ubsets
36	630	35	2	1	13 78 66 11 55 v b	r k l v b	r k l
37	666	36	2	1	14 364 286 11 220		

cheetsheet Page 2

etsheet			
38 703 37 2 1		25 1 1 25 1	39 1 1 39 1
39 741 38 2 1		26 26 25 25 24	40 40 39 39 38
40 780 39 2 1		27 351 325 25 300	41 820 780 39 741
41 820 40 2 1	12-subsets		
42 861 41 2 1	v b r k l		
43 903 42 2 1			
44 946 43 2 1	12 1 1 12 1	26-subsets	40-subsets
45 990 44 2 1	13 13 12 12 11	v b r k l	v b r k l
	14 91 78 12 66		
	15 455 364 12 286	26 1 1 26 1	40 1 1 40 1
		27 27 26 26 25	41 41 40 40 39
3-subsets		28 378 351 26 325	42 861 820 40 780
v b r k l			
	13-subsets		
3 1 1 3 1	v b r k l		
4 4 3 3 2		27-subsets	41-subsets
5 10 6 3 3	13 1 1 13 1	v b r k l	v b r k l
6 20 10 3 4	14 14 13 13 12		
7 35 15 3 5	15 105 91 13 78	27 1 1 27 1	41 1 1 41 1
8 56 21 3 6	16 560 455 13 364	28 28 27 27 26	42 42 41 41 40
9 84 28 3 7		29 406 378 27 351	43 903 861 41 820
10 120 36 3 8			
11 165 45 3 9			
12 220 55 3 10	14-subsets		
13 286 66 3 11	v b r k l	28-subsets	42-subsets
14 364 78 3 12		v b r k l	v b r k l
15 455 91 3 13	14 1 1 14 1		
16 560 105 3 14	15 15 14 14 13	28 1 1 28 1	42 1 1 42 1
17 680 120 3 15	16 120 105 14 91	29 29 28 28 27	43 43 42 42 41
18 816 136 3 16	17 680 560 14 455	30 435 406 28 378	44 946 903 42 861
19 969 153 3 17			
	15-subsets	29-subsets	43-subsets
	15-subsets v b r k l		43-subsets v b r k 1
4-subsets v b r k l	15-subsets v b r k l	29-subsets v b r k l	43-subsets v b r k 1
4-subsets v b r k l	15-subsets v b r k l	29-subsets v b r k 1 29 1 1 29 1	43-subsets v b r k 1
4-subsets v b r k l	15-subsets v b r k 1 15 1 1 15 1 16 16 15 15 14	29-subsets v b r k 1 29 1 1 29 1	43-subsets v b r k 1 43 1 1 43 1 44 44 43 43 42
4-subsets v b r k l	15-subsets v b r k 1 15 1 1 15 1 16 16 15 15 14	29-subsets v b r k 1	43-subsets v b r k 1
4-subsets v b r k 1 4 1 1 4 1 5 5 4 4 3	15-subsets v b r k 1 15 1 1 15 1 16 16 15 15 14 17 136 120 15 105	29-subsets v b r k 1	43-subsets v b r k 1
4-subsets v b r k 1 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10	15-subsets v b r k 1 15 1 1 15 1 16 16 15 15 14 17 136 120 15 105 18 816 680 15 560	29-subsets v b r k 1	43-subsets v b r k 1
4-subsets v b r k 1 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10	15-subsets v b r k 1 15 1 1 15 1 16 16 15 15 14 17 136 120 15 105 18 816 680 15 560	29-subsets v b r k 1	43-subsets v b r k 1
4-subsets v b r k 1 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10 8 70 35 4 15 9 126 56 4 21	15-subsets v b r k 1 15 1 1 15 1 16 16 15 15 14 17 136 120 15 105 18 816 680 15 560	29-subsets v b r k 1	43-subsets v b r k 1
4-subsets v b r k 1 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10 8 70 35 4 15 9 126 56 4 21 10 210 84 4 28	15-subsets v b r k 1	29-subsets v b r k 1 29 1 1 29 1 30 30 29 29 28 31 465 435 29 406	43-subsets v b r k 1
4-subsets v b r k l 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10 8 70 35 4 15 9 126 56 4 21 10 210 84 4 28 11 330 120 4 36	15-subsets v b r k 1 15 1 1 15 1 16 16 15 15 14 17 136 120 15 105 18 816 680 15 560	29-subsets v b r k 1	43-subsets v b r k 1 43 1 1 43 1 44 44 43 43 42 45 990 946 43 903 44-subsets v b r k 1
4-subsets v b r k 1 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10 8 70 35 4 15 9 126 56 4 21 10 210 84 4 28 11 330 120 4 36 12 495 165 4 45	15-subsets v b r k 1	29-subsets v b r k 1	43-subsets v b r k 1
4-subsets v b r k 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10 8 70 35 4 15 9 126 56 4 21 10 210 84 4 28 11 330 120 4 36 12 495 165 4 45 13 715 220 4 55	15-subsets v b r k l	29-subsets v b r k 1	43-subsets v b r k 1 43 1 1 43 1 44 44 43 43 43 42 45 990 946 43 903
4-subsets v b r k 1 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10 8 70 35 4 15 9 126 56 4 21 10 210 84 4 28 11 330 120 4 36 12 495 165 4 45 13 715 220 4 55	15-subsets v b r k 1	29-subsets v b r k 1 29 1 1 29 1 30 30 29 29 28 31 465 435 29 406 30-subsets v b r k 1 30 1 1 30 1 31 31 30 30 29 32 496 465 30 435	43-subsets v b r k 1 43 1 1 43 1 44 44 43 43 43 42 45 990 946 43 903
4-subsets v b r k 1 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10 8 70 35 4 15 9 126 56 4 21 10 210 84 4 28 11 330 120 4 36 12 495 165 4 45 13 715 220 4 55	15-subsets v b r k 1 15 1 1 15 1 16 16 15 15 14 17 136 120 15 105 18 816 680 15 560 16-subsets v b r k 1 16 1 1 16 1 17 17 16 16 15 18 153 136 16 120	29-subsets v b r k 1	43-subsets v b r k 1
4-subsets v b r k l 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10 8 70 35 4 15 9 126 56 4 21 10 210 84 4 28 11 330 120 4 36 12 495 165 4 45 13 715 220 4 55	15-subsets v b r k 1	29-subsets v b r k 1	43-subsets v b r k 1 43 1 1 43 1 44 44 43 43 42 45 990 946 43 903
4-subsets v b r k 1 4 1 1 4 1 5 5 4 4 3 6 15 10 4 6 7 35 20 4 10 8 70 35 4 15 9 126 56 4 21 10 210 84 4 28 11 330 120 4 36 12 495 165 4 45 13 715 220 4 55	15-subsets v b r k 1	29-subsets v b r k 1 29 1 1 29 1 30 30 29 29 28 31 465 435 29 406 30-subsets v b r k 1 30 1 1 30 1 31 31 30 30 29 32 496 465 30 435	43-subsets v b r k l 43 1 1 43 1 44 44 43 43 42 45 990 946 43 903

cheetsheet Page 3

5 1 1 5 1	17-subsets		45 1 1 45 1
6 6 5 5 4	v b r k 1	31 1 1 31 1	46 46 45 45 44
7 21 15 5 10		32 32 31 31 30	
8 56 35 5 20	17 1 1 17 1	33 528 496 31 465	
9 126 70 5 35	18 18 17 17 16		
10 252 126 5 56	19 171 153 17 136		46-subsets
11 462 210 5 84			v b r k l
12 792 330 5 120		32-subsets	
		v b r k l	46 1 1 46 1
	18-subsets		47 47 46 46 45
	v b r k l	32 1 1 32 1	
6-subsets		33 33 32 32 31	
v b r k l	18 1 1 18 1	34 561 528 32 496	
	19 19 18 18 17		47-subsets
6 1 1 6 1	20 190 171 18 153		v brk 1
7 7 6 6 5			
8 28 21 6 15		33-subsets	47 1 1 47 1
9 84 56 6 35		v b r k l	48 48 47 47 46
10 210 126 6 70	19-subsets		
11 462 252 6 126	v b r k l	33 1 1 33 1	
12 924 462 6 210		34 34 33 33 32	
	19 1 1 19 1	35 595 561 33 528	48-subsets
	20 20 19 19 18		v b r k l
	21 210 190 19 171		40 4 4 40 4
			48 1 1 48 1
			49 49 48 48 47

cheetsheet Page 4