|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | A1 | A2 | A3 | A4 | A` | A`` | Ak |
| A0 | r2 |  |  | r1!r2+ !r1 |  |  |  |
| A1 | p4p5!p6r2 | p4!p5r2 | p4p5p6r2+!p4!r1 |  | p4!p5r1!r2 | !p4p1p5!r1 | p4p5r1!r2+  p4!r1 |
| A2 | !p6r2+r1!r2+ !r1 |  | p6r2 |  |  |  |  |
| A3 |  | !p3r1!r2+  p3!p2p6p1  r1!r2+ p1!p5!r1 | p3p2!p4r1!r2 | r2+!p1 !r1 | p3p2p4!p5  r1!r2+  p3!p2!p6!p5  r1!r2 | p1p5!r1 | p3p2p4p5  r1!r2+  p3!p2!p6p5  r1!r2 |
| A4 | !p1!p6r2+ p1!p3p2p4p5!p6r2+ p3!p2  !p6!r1 | p1!p3p2p4!p5r2+p1r1!r2+  p3p2!p4p1!p5  !r1 | !p1p6r2+  p1!p3p2p4p5 p6r2+!p3!r1 | p1p3r2+ p3p2!p4!p1!r1 | p3!p2p6!r1 | p3p2!p4p1p5  !r1 | p1!p3!p2r2+  p3p2p4!r1 |
| A` |  |  | !p4r1+!r1!r2 |  | p4!p5r1 |  | p4p5r1 |
| A`` |  | !p5 |  |  | p5 |  |  |

U1

b0 = b1 = b2 = b3 = b4 = r1r2 + (!r1r2/0) = (r1/1)r2 = r2 r1r2

U2

b0 = b1 = b2 = b3 = b4 = r1!r2 + (!r1r2/0) = r1!r2

bI = r1!r2 + (r1r2/0) + (!r1r2/0) = (r1(r2/1))/r1!r2 = r1

U3

b0 = b1 = b2 = b3 = b4 = !r1!r2 + (!r1r2/0) = !r1(r2/1) = !r1 !r1r2

bI = !r1!r2 + (r1r2/0) + (!r1r2/0) =!r1!r2

bII = !r1!r2 + (r1r2/0) + (r1!r2/0) + (!r1r2/0) = 1

R1 a5

R2 b10

P1 15

P2 22

P3 31

P4 45

P5 58

P6 64

1. A0 > r1r1r2r2 A1 \* r2 A4 \* r1 r2r3 A4
2. A1 > r1r4 r2r5 p41 p52 p63 A3 \* A1 \* 2 A2 \* r5 p44 p56 Ak \* 6 A` \* r4 r2r6 p47 Ak \* 7 A3 \* p18 p59 A``
3. A2 > r1r7 r2r8 p610A3 \* A1 \* r8A1 \* r7 r2r9A1
4. A3 > r1r10 r2r11 A4 \* r11p311 p212 p413 p514 Ak \* 14A` \* 13A3 \* 12 p615 p116 A2 \* 62p553Ak \* 53A` \* 30A2 \* a3r2b7p112p554A`` \* 54A2 \* 12A4
5. A4 > r1a3 r2b6
6. A0 > r1a0r2b0A1 \* b0A4 \* a0 r2b1A4
7. A1 > r1a1r2b2p44p55p660A3 \* A1 \* 5A2 \* b2 p440p550Ak \* 50A` \* a1r2b3p441Ak \* 41A3 \* p110p551A``
8. A2 > r1a2 r2b4p661A3 \* A1 \* b4A1 \* a2 r2b5A1
9. A3 > r1a3 r2b6A4 \* b6p330p220p442p552Ak \* 52A` \* 42A3 \* 20p662p111A2 \* 62p553Ak \* 53 A` \* 30A2 \* a3r2b7p112p554 A`` \* 54A2 \* 12A4
10. A4 > r1a4 r2b8p113p331A4 \* 31 p221p443 p555p663A3 \* 63 A1 \* 55A2 \* 21Ak \* b8 p114A2 \* a4 r2b9p331p222p444Ak \* 44p115p556 A`` \* 56A2 \* 15A4 \* 22p664 A` \* 64A1 \* 31A3
11. A` > r1a5 p44557 A` \* 45 A3 \* a5 b10 A3
12. A`` > p558 A` \* 58 A2
13. A0 > r1a0r2b0 b4A1 \* a0 r2b1b0 12 15  A4
14. A1 > r1a1r2b2p44p55p660 \* b2 p440p55021    Ak \* a1r2b3p441 \* p110p551
15. A2 > r1a2 r2b4p661 41 423145a5b10 A3 \* a2 r2b5
16. A3 > r1a3 r2b6 \* b6p330p220p442p552 \* 20p662p111530 54 5556 58  A2 \* 62p553 \* a3r2b7p112p554 A``
17. A4 > r1a4 r2b8p113p331 \* 31 p221p443 p555p663 \* b8 p114 \* a4 r2b9p331p222p444 \* 44p115p556 \* 22p664  \*
18. A` > r1a5 p445
19. A`` > p558 505253571112 A`
20. A0 > r1a0r2b0 b4A1 \* a0 b0 12 15  A4
21. A1 > r1a1r2b2p55p660 \* b2p55021    Ak \* a1p441 \* 
22. A2 > r1a2 r2b4p661 41 423145a5A3 \* a2 
23. A3 > r1a3 r2b6 \* b6p330p220p442p552 \* 20p662530 54 5556 58  A2 \* 62p553 \* a3p112p554 A``
24. A4 > r1a4 r2b8p113p331 \* 31 p221 p555p663 \* b8 \* a4 p331p222p444 \* 44p115p556 \* 22p664  \*
25. A` > r1a5 p445
26. A`` > p558 5052531112 A`
27. A0 > r1a0r2b0A1 \* b0A4 \* a0A4
28. A1 > r1a1r2b2p55p660A3 \* A1 \* 5A2 \* b2p550Ak \* 50A` \* a1p441Ak \* 41A3 \*
29. A2 > r1a2 r2b4p661A3 \* A1 \* b4A1 \* a2A1
30. A3 > r1a3 r2b6A4 \* b6p330p220p442p552Ak \* 52A` \* 42A3 \* 20p662A2 \* 62p553Ak \* 53 A` \* 30A2 \* a3p112p554 A`` \* 54A2 \* 12A4
31. A4 > r1a4 r2b8 p331A4 \* 31 p221 p555p663A3 \* 63 A1 \* 55A2 \* 21Ak \* b8 A2 \* a4p331p222p444Ak \* 44p115p556 A`` \* 56A2 \* 15A4 \* 22p664 A` \* 64A1 \* 31A3
32. A` > r1a5 p445 A` \* 45 A3 \* a5 A3
33. A`` > p558 A` \* 58 A2
34. A0 > r1a0r2b0 b4a2A1 + \* a0 b0 12 15  A4 +
35. A1 > r1a1r2b2p55p660 + \* b2p55021    Ak \* a1p441 \* 
36. A2 > r1a2 r2b4p661 41 423145a5A3 +
37. A3 > r1a3 r2b6 \* b6p330p220p442p552 + \* 20p662530 54 5556 58b8A2 + \* 62p553 \* a3p112p554 A`` +
38. A4 > r1a4 r2b8p113p331 \* 31 p221 p555p663 \* a4 p331p222p444 \* 44p115p556 \* 22p664  \*
39. A` > r1a5 p445
40. A`` > p558 5052531112 A` +

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | a1 | a2 | a3 | a4 | a` | a`` | ak |
| a0 | r1r2 |  |  | !r2+!r1 |  |  |  |
| a1 | !p6 | !p5 | r1r2p5p6+!p4 |  | !p5 | p1p5 | !r2p5+!r1p4 |
| a2 | !p6+!r2+ !r1 |  | r1r2p6 |  |  |  |  |
| a3 |  | !p2p6+!p3+ !p5 | !p4 | r1r2+!p1 | !p5 | !r1p1p5 | !r2p3p2p4p5+!p6p5 |
| a4 | !p6 | !p5+!r2+!p5 | !p3p2p5p6+ !p3 | r1r2p3+!p1 | !p2 p6 | !p4p1p5 | !p2+!r1p3p2p4 |
| a` |  |  | !p4+!r1 |  | r1p4 |  |  |
| a`` |  | !p5 |  |  | p5 |  |  |