

num: (3, 2)
length: 3
word: b^1, a^{-1}, b^2
matrix: $[[1, 0], [2, 4]]$

num: (5, 2)
length: 5
word: $b^1, a^{-1}, b^1, a^{-1}, b^{-2}$
matrix: $[[1, 0], [-2, 16]]$

num: (7, 2)
length: 13
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^{-1}, a^{-1}, b^{-1}, a^1, b^{-2}$
matrix: $[[1, 0], [-718, 4096]]$

num: (2, 3)
length: 3
word: b^1, a^{-1}, b^{-3}
matrix: $[[1, 0], [-3, 9]]$

num: (4, 3)
length: 3
word: b^1, a^{-1}, b^3
matrix: $[[1, 0], [3, 9]]$

num: (5, 3)
length: 5
word: $b^1, a^{-1}, b^2, a^{-1}, b^{-3}$
matrix: $[[1, 0], [-12, 81]]$

num: (7, 3)
length: 7
word: $b^1, a^{-1}, b^1, a^{-2}, b^2, a^{-1}, b^3$
matrix: $[[1, 0], [129, 729]]$

num: (8, 3)
length: 5
word: $b^1, a^{-1}, b^1, a^{-1}, b^6$
matrix: $[[1, 0], [6, 81]]$

num: (10, 3)
length: 13
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^2, a^{-1}, b^1, a^1, b^{-2}, a^1, b^6$
matrix: $[[1, 0], [25068, 531441]]$

num: (11, 3)
length: 23
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^{-1}, a^{-1}, b^1, a^{-3}, b^{-1}, a^2, b^2, a^{-1}, b^1, a^{-1}, b^1, a^{-2}, b^3$

matrix: $[[1, 0], [337396290, 3486784401]]$

num: (3, 4)

length: 3

word: b^1, a^{-1}, b^{-4}

matrix: $[[1, 0], [-4, 16]]$

num: (5, 4)

length: 3

word: b^1, a^{-1}, b^4

matrix: $[[1, 0], [4, 16]]$

num: (7, 4)

length: 5

word: $b^1, a^{-1}, b^1, a^2, b^{-2}$

matrix: $[[1, 0], [-20, 64]]$

num: (9, 4)

length: 5

word: $b^1, a^{-1}, b^1, a^{-2}, b^{-2}$

matrix: $[[1, 0], [-12, 64]]$

num: (11, 4)

length: 7

word: $b^1, a^{-1}, b^1, a^{-1}, b^2, a^1, b^{-4}$

matrix: $[[1, 0], [-100, 1024]]$

num: (13, 4)

length: 7

word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^{36}$

matrix: $[[1, 0], [36, 4096]]$

num: (15, 4)

length: 31

word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-2}, b^1, a^{-1}, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^{-2}, b^{-3}, a^1, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^4, b^1, a^{-4}, b^{-5}$

matrix: $[[1, 0], [-14801395187124, 281474976710656]]$

num: (2, 5)

length: 3

word: b^2, a^{-1}, b^{-10}

matrix: $[[1, 0], [-5, 25]]$

num: (3, 5)

length: 3

word: b^2, a^{-1}, b^{10}

matrix: $[[1, 0], [5, 25]]$

num: (4, 5)

length: 3
word: b^1, a^{-1}, b^{-5}
matrix: $[[1, 0], [-5, 25]]$

num: (6, 5)
length: 3
word: b^1, a^{-1}, b^5
matrix: $[[1, 0], [5, 25]]$

num: (7, 5)
length: 7
word: $b^1, a^{-1}, b^3, a^{-1}, b^{-2}, a^2, b^5$
matrix: $[[1, 0], [2065, 15625]]$

num: (8, 5)
length: 5
word: $b^1, a^{-1}, b^2, a^{-2}, b^5$
matrix: $[[1, 0], [85, 625]]$

num: (9, 5)
length: 7
word: $b^1, a^{-1}, b^1, a^2, b^3, a^{-1}, b^{-5}$
matrix: $[[1, 0], [-1530, 15625]]$

num: (11, 5)
length: 11
word: $b^1, a^{-1}, b^1, a^{-3}, b^2, a^{-1}, b^{-1}, a^{-2}, b^3, a^{-1}, b^5$
matrix: $[[1, 0], [995855, 9765625]]$

num: (12, 5)
length: 7
word: $b^1, a^{-1}, b^1, a^{-1}, b^{-1}, a^5, b^{-1}$
matrix: $[[1, 0], [-285, 625]]$

num: (13, 5)
length: 5
word: $b^1, a^{-1}, b^1, a^{-1}, b^{-15}$
matrix: $[[1, 0], [-15, 625]]$

num: (14, 5)
length: 7
word: $b^1, a^{-1}, b^1, a^{-1}, b^2, a^{-2}, b^{10}$
matrix: $[[1, 0], [570, 15625]]$

num: (16, 5)
length: 9
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^{-2}, a^3, b^{15}$
matrix: $[[1, 0], [8080, 390625]]$

num: (17, 5)
length: 19
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^5, b^{-1}, a^{-2}, b^1, a^1, b^2, a^{-1}, b^3, a^{-1}, b^1, a^{-1}, b^{-10}$
matrix: $[[1, 0], [-4264153760, 152587890625]]$

num: (18, 5)
length: 19
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^2, b^{-1}, a^3, b^{-1}, a^{-1}, b^{-1}, a^7, b^6, a^{-1}, b^{10}$
matrix: $[[1, 0], [109141648260, 3814697265625]]$

num: (19, 5)
length: 37
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^7, b^{-2}, a^1, b^1, a^{-1}, b^1, a^4, b^{-1}, a^1, b^1, a^{-4}, b^1, a^{-1}, b^{-1}, a^2, b^1, a^3, b^2, a^{-1}, b^{53}, a^1, b^{-1}, a^{-1}, b^{-5}$
matrix: $[[1, 0], [-737284200889922284276330, 14551915228366851806640625]]$

num: (5, 6)
length: 3
word: b^1, a^{-1}, b^{-6}
matrix: $[[1, 0], [-6, 36]]$

num: (7, 6)
length: 3
word: b^1, a^{-1}, b^6
matrix: $[[1, 0], [6, 36]]$

num: (11, 6)
length: 5
word: $b^1, a^{-1}, b^1, a^3, b^{-2}$
matrix: $[[1, 0], [-42, 144]]$

num: (13, 6)
length: 5
word: $b^1, a^{-1}, b^1, a^{-3}, b^{-2}$
matrix: $[[1, 0], [-30, 144]]$

num: (17, 6)
length: 9
word: $b^1, a^{-1}, b^1, a^{-1}, b^2, a^{-1}, b^2, a^2, b^{-6}$
matrix: $[[1, 0], [-6342, 104976]]$

num: (19, 6)
length: 15
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^{-1}, a^5, b^1, a^1, b^9, a^{-1}, b^1, a^{-1}, b^6$
matrix: $[[1, 0], [56523462, 967458816]]$

num: (23, 6)
length: 75
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^2,$
 $a^1, b^{-2}, a^{-1}, b^1, a^2, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1,$
 $b^1, a^2, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^3, b^{-1}, a^{-12},$
 $b^1, a^{-1}, b^1, a^{-2}, b^2, a^1, b^{16}, a^3, b^{-2}, a^1, b^1, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1},$
 $a^6, b^{-2}, a^{-6}, b^{-1}, a^1, b^{-1}, a^{-3}, b^{17}, a^{-1}, b^{-2}$
matrix: $[[1, 0], [-52365965511443238141505882491051635154,$
 $454658218573929784111766025256801665024]]$

num: (2, 7)
length: 3
word: b^3, a^{-1}, b^{-21}
matrix: $[[1, 0], [-7, 49]]$

num: (3, 7)
length: 3
word: b^2, a^{-1}, b^{-14}
matrix: $[[1, 0], [-7, 49]]$

num: (4, 7)
length: 3
word: b^2, a^{-1}, b^{14}
matrix: $[[1, 0], [7, 49]]$

num: (5, 7)
length: 5
word: $b^1, a^{-1}, b^{-3}, a^{-3}, b^7$
matrix: $[[1, 0], [511, 2401]]$

num: (6, 7)
length: 3
word: b^1, a^{-1}, b^{-7}
matrix: $[[1, 0], [-7, 49]]$

num: (8, 7)
length: 3
word: b^1, a^{-1}, b^7
matrix: $[[1, 0], [7, 49]]$

num: (9, 7)
length: 7
word: $b^1, a^{-1}, b^4, a^{-2}, b^2, a^{-3}, b^{-7}$
matrix: $[[1, 0], [-12516, 117649]]$

num: (10, 7)
length: 5
word: $b^1, a^{-1}, b^2, a^2, b^7$
matrix: $[[1, 0], [231, 2401]]$

num: (11, 7)
length: 11
word: $b^1, a^{-1}, b^2, a^{-3}, b^1, a^1, b^1, a^8, b^2, a^2, b^{-7}$
matrix: $[[1, 0], [-26733161, 282475249]]$

num: (12, 7)
length: 7
word: $b^1, a^{-1}, b^1, a^2, b^{-1}, a^{-7}, b^{-1}$
matrix: $[[1, 0], [-1302, 2401]]$

num: (13, 7)
length: 15
word: $b^1, a^{-1}, b^1, a^3, b^2, a^2, b^{-1}, a^{-1}, b^{-2}, a^1, b^3, a^{-1}, b^{-3}, a^7, b^{-1}$
matrix: $[[1, 0], [-8088676820, 13841287201]]$

num: (15, 7)
length: 9
word: $b^1, a^{-1}, b^1, a^{-4}, b^2, a^{-2}, b^4, a^{-1}, b^7$
matrix: $[[1, 0], [416017, 5764801]]$

num: (16, 7)
length: 5
word: $b^1, a^{-1}, b^1, a^{-2}, b^{14}$
matrix: $[[1, 0], [77, 2401]]$

num: (17, 7)
length: 17
word: $b^1, a^{-1}, b^1, a^{-1}, b^{-1}, a^{-4}, b^5, a^{-1}, b^{-2}, a^2, b^{-1}, a^{-2}, b^{-1}, a^3, b^1, a^1, b^{14}$
matrix: $[[1, 0], [956693158904, 33232930569601]]$

num: (18, 7)
length: 7
word: $b^1, a^{-1}, b^1, a^{-1}, b^{-6}, a^1, b^{-14}$
matrix: $[[1, 0], [-3367, 117649]]$

num: (19, 7)
length: 7
word: $b^1, a^{-1}, b^1, a^{-1}, b^3, a^2, b^{14}$
matrix: $[[1, 0], [3059, 117649]]$

num: (20, 7)
length: 27
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^1, b^{-2}, a^1, b^{-2}, a^{-1}, b^1, a^{-2}, b^1, a^{-2}, b^1, a^{-1}, b^{-2}, a^1, b^{-2}, a^2, b^{-2}, a^1, b^1, a^{161}, b^{-4}, a^1, b^7$
matrix: $[[1, 0], [9081423418041870280, 191581231380566414401]]$

num: (22, 7)

length: 11
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-2}, b^1, a^{-1}, b^3, a^{43}, b^{-7}$
matrix: $[[1, 0], [-12853330, 282475249]]$

num: (23, 7)
length: 23
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^3, a^1, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-4}, b^{-1}, a^1, b^{-2}, a^{-1}, b^{-1}, a^2, b^{-1}, a^5, b^{6482}$
matrix: $[[1, 0], [183575050046885, 3909821048582988049]]$

num: (24, 7)
length: 15
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-5}, b^{-1}, a^1, b^{-1}, a^{21}, b^{-1}, a^1, b^{-1}$
matrix: $[[1, 0], [-2870385, 5764801]]$

num: (25, 7)
length: 63
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^2, a^{-1}, b^{-13}, a^1, b^{-1}, a^1, b^{-3}, a^3, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^{-8}, b^5, a^{-1}, b^1, a^1, b^{-1}, a^1, b^{-2}, a^1, b^1, a^1, b^1, a^1, b^{-13}, a^1, b^{-1}, a^1, b^7, a^{-7}, b^3, a^{-1}, b^1, a^{-1}, b^{-1}, a^{-1}, b^1, a^1, b^2, a^{-1}, b^{-1}, a^{-1}, b^{-42}, a^{-4}, b^{-1}, a^1, b^1, a^{-1}, b^1, a^{14}, b^3$
matrix: $[[1, 0], [19621281193613507525444251905621421204429633250, 211587613802425391637729361787678676290060193601]]$

num: (26, 7)
length: 113
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^1, b^{-1}, a^{-1}, b^1, a^{-1}, b^1, a^2, b^2, a^{-1}, b^1, a^{-1}, b^{-1}, a^{-3}, b^{-5}, a^{-1}, b^1, a^{-1}, b^1, a^1, b^{-1}, a^{-2}, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^8, b^{-1}, a^{-1}, b^{10}, a^{-1}, b^{-1}, a^{-1}, b^1, a^{-1}, b^1, a^{47}, b^{-1}, a^2, b^{535}, a^{-1}, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^3, a^{-1}, b^1, a^{-1}, b^1, a^3, b^1, a^{-1}, b^{14}, a^4, b^{-37}, a^1, b^{-1}, a^1, b^{-9}, a^1, b^{-1}, a^1, b^{-3}, a^{-1}, b^2, a^2, b^{-1}, a^{29}, b^{-2}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^1, a^{17}, b^1, a^{-1}, b^1, a^1, b^{-1}, a^2, b^1, a^{13}, b^{-1}, a^1, b^{-1}, a^1, b^{-10}, a^{-5}, b^1, a^{-1}, b^1, a^{-1}, b^{-6}, a^{98}, b^{-1}$
matrix: $[[1, 0], [-5033942843113357769452432089852382562663925644043666159732454044776756317506414829761715586, 18646113417161314493261616803956698971446415858248583415929120740302154318206422517221824801]]$

num: (27, 7)
length: 147
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^2, b^{31}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-5}, a^{-1}, b^3, a^{-1}, b^1, a^{-1}, b^1, a^1, b^1, a^1, b^2, a^1, b^{-12}, a^1, b^{-1}, a^4, b^{-4}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^1, b^{-1}, a^{-6}, b^1, a^{-1}, b^{-1}, a^{-1}, b^2, a^3, b^{10}, a^2, b^{62}, a^{-1}, b^1, a^{-1}, b^{-1}, a^{-1}, b^{-1}, a^1, b^{-2}, a^4, b^{-9}, a^2, b^1, a^{-18}, b^1, a^{-3}, b^{-1}, a^2, b^{-5}, a^{18}, b^2, a^2, b^3, a^3, b^1, a^7, b^{-2}, a^1, b^1, a^{-1}, b^1, a^{-1}, b^1, a^2, b^1, a^{-1}, b^{-2}, a^{-2}, b^1, a^{-1}, b^{-1}, a^{-3}, b^2, a^{-1}, b^1, a^{-1}, b^{37}, a^1,$

$b^1, a^{-1}, b^1, a^{-1}, b^3, a^{-1}, b^1, a^{-1}, b^{-4}, a^{-2}, b^{-1}, a^2, b^3, a^{-1}, b^1, a^{-1},$
 $b^1, a^3, b^{-2}, a^1, b^1, a^{-1}, b^{-5}, a^{-1}, b^2, a^{-1}, b^2, a^{-26}, b^1, a^{-3}, b^{-1}, a^3, b^{-14}$

matrix: $[[1, 0], [-$

9218163502320928009117781857390881746627352689367980197680008121800
91730899019682655681374122222906482135494015739948916,
4944447410368420611677552723263003650621645445111595111414093793918
9086681861783742884254926894497682656270887314988886401]]

num: (3, 8)

length: 3

word: b^3, a^{-1}, b^{24}

matrix: $[[1, 0], [8, 64]]$

num: (5, 8)

length: 3

word: b^2, a^{-1}, b^8

matrix: $[[1, 0], [4, 16]]$

num: (7, 8)

length: 3

word: b^1, a^{-1}, b^{-8}

matrix: $[[1, 0], [-8, 64]]$

num: (9, 8)

length: 3

word: b^1, a^{-1}, b^8

matrix: $[[1, 0], [8, 64]]$

num: (11, 8)

length: 5

word: $b^1, a^{-1}, b^3, a^{-2}, b^{-4}$

matrix: $[[1, 0], [-168, 1024]]$

num: (13, 8)

length: 7

word: $b^1, a^{-1}, b^2, a^{-2}, b^1, a^2, b^{-4}$

matrix: $[[1, 0], [-664, 4096]]$

num: (15, 8)

length: 5

word: $b^1, a^{-1}, b^1, a^4, b^{-2}$

matrix: $[[1, 0], [-72, 256]]$

num: (17, 8)

length: 5

word: $b^1, a^{-1}, b^1, a^{-4}, b^{-2}$

matrix: $[[1, 0], [-56, 256]]$

[illegible]

2839213766779714416208296124562517712318911565184836172974571090549
372219192960637992933791850638927971728600024477257552869537611776]]

num: (2, 9)
length: 3
word: b^4, a^{-1}, b^{-36}
matrix: $[[1, 0], [-9, 81]]$

num: (4, 9)
length: 3
word: b^2, a^{-1}, b^{-18}
matrix: $[[1, 0], [-9, 81]]$

num: (5, 9)
length: 3
word: b^2, a^{-1}, b^{18}
matrix: $[[1, 0], [9, 81]]$

num: (7, 9)
length: 5
word: $b^1, a^{-1}, b^{-4}, a^{-3}, b^3$
matrix: $[[1, 0], [360, 729]]$

num: (8, 9)
length: 3
word: b^1, a^{-1}, b^{-9}
matrix: $[[1, 0], [-9, 81]]$

num: (10, 9)
length: 3
word: b^1, a^{-1}, b^9
matrix: $[[1, 0], [9, 81]]$

num: (11, 9)
length: 7
word: $b^1, a^{-1}, b^5, a^{-2}, b^2, a^3, b^3$
matrix: $[[1, 0], [14949, 59049]]$

num: (13, 9)
length: 5
word: $b^1, a^{-1}, b^2, a^3, b^{-3}$
matrix: $[[1, 0], [-180, 729]]$

num: (14, 9)
length: 5
word: $b^1, a^{-1}, b^2, a^{-3}, b^{-3}$
matrix: $[[1, 0], [-144, 729]]$

num: (16, 9)

length: 5
word: $b^1, a^{-1}, b^1, a^2, b^{-18}$
matrix: $[[1, 0], [-207, 6561]]$

num: (17, 9)
length: 9
word: $b^1, a^{-1}, b^1, a^4, b^2, a^2, b^5, a^{-1}, b^{-9}$
matrix: $[[1, 0], [-2376630, 43046721]]$

num: (19, 9)
length: 19
word: $b^1, a^{-1}, b^1, a^{-5}, b^2, a^{-2}, b^{-1}, a^{-2}, b^1, a^1, b^2, a^{10}, b^1, a^4, b^{-2}, a^{-2}, b^5, a^{-1}, b^9$
matrix: $[[1, 0], [8389747684099593, 150094635296999121]]$

num: (20, 9)
length: 7
word: $b^1, a^{-1}, b^1, a^{-2}, b^{-1}, a^9, b^{-1}$
matrix: $[[1, 0], [-3114, 6561]]$

num: (22, 9)
length: 13
word: $b^1, a^{-1}, b^1, a^{-1}, b^{-1}, a^{-2}, b^1, a^1, b^2, a^{15}, b^{-1}, a^3, b^{-3}$
matrix: $[[1, 0], [-502008129, 3486784401]]$

num: (23, 9)
length: 13
word: $b^1, a^{-1}, b^1, a^{-1}, b^{-4}, a^{-4}, b^{-1}, a^{-1}, b^{-1}, a^{-7}, b^1, a^3, b^3$
matrix: $[[1, 0], [3942529947, 31381059609]]$

num: (25, 9)
length: 11
word: $b^1, a^{-1}, b^1, a^{-1}, b^2, a^{11}, b^2, a^1, b^1, a^{-2}, b^{18}$
matrix: $[[1, 0], [70554033, 3486784401]]$

num: (26, 9)
length: 9
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^1, b^3, a^{-3}, b^{-6}$
matrix: $[[1, 0], [-30060, 531441]]$

num: (28, 9)
length: 21
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-2}, b^2, a^6, b^{-1}, a^1, b^{-1}, a^2, b^2, a^{-2}, b^{-1}, a^{-3}, b^1, a^1, b^4, a^{-8}, b^{-9}$
matrix: $[[1, 0], [-5336471079553383, 150094635296999121]]$

num: (29, 9)
length: 15
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^{-4}, a^7, b^5, a^2, b^2, a^{-2}, b^1, a^{-1}, b^{-36}$

matrix: $[[1, 0], [-194540378706, 22876792454961]]$

num: (31, 9)

length: 35

word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-3}, b^2, a^{-1}, b^1, a^{-14}, b^1, a^{-1}, b^1, a^1, b^{-1}, a^{-2}, b^{-1}, a^1, b^{-3}, a^{-1}, b^1, a^5, b^{-69}, a^2, b^{-1}, a^2, b^{-1}, a^1, b^8, a^{-2}, b^{-1}, a^3, b^{-3}$

matrix: $[[1, 0], [-4252167824668756959186455958, 42391158275216203514294433201]]$

num: (32, 9)

length: 21

word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^3, a^{-1}, b^1, a^3, b^{-1}, a^1, b^{-1}, a^{-34}, b^{-3}, a^{-1}, b^6, a^{-1}, b^{-9}$

matrix: $[[1, 0], [-56064638245221, 1853020188851841]]$

num: (34, 9)

length: 49

word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^3, a^{46}, b^{19}, a^1, b^{-1}, a^1, b^1, a^{-1}, b^1, a^{-1}, b^{-1}, a^{-3}, b^1, a^{-1}, b^{12}, a^{-2}, b^1, a^{-1}, b^1, a^1, b^{-6}, a^2, b^{-1}, a^{-2}, b^1, a^{-1}, b^1, a^{-1}, b^{-3}, a^{-3}, b^2, a^5, b^{-1}, a^3, b^1, a^3, b^{-3}$

matrix: $[[1, 0], [-13406928627951209807143632641125329174, 147808829414345923316083210206383297601]]$

num: (35, 9)

Unable to find

num: (3, 10)

length: 3

word: b^3, a^{-1}, b^{-30}

matrix: $[[1, 0], [-10, 100]]$

num: (7, 10)

length: 5

word: $b^1, a^{-1}, b^{-3}, a^{-4}, b^{-5}$

matrix: $[[1, 0], [-670, 2500]]$

num: (9, 10)

length: 3

word: b^1, a^{-1}, b^{-10}

matrix: $[[1, 0], [-10, 100]]$

num: (11, 10)

length: 3

word: b^1, a^{-1}, b^{10}

matrix: $[[1, 0], [10, 100]]$

num: (13, 10)

length: 13
word: $b^1, a^{-1}, b^3, a^2, b^3, a^{-2}, b^2, a^{-2}, b^{-5}, a^{-2}, b^{-3}, a^1, b^{-1}$
matrix: $[[1, 0], [-206080, 625]]$

num: (17, 10)
length: 7
word: $b^1, a^{-1}, b^1, a^2, b^{-1}, a^{10}, b^{-1}$
matrix: $[[1, 0], [-1570, 2500]]$

num: (19, 10)
length: 5
word: $b^1, a^{-1}, b^1, a^5, b^{-2}$
matrix: $[[1, 0], [-110, 400]]$

num: (21, 10)
length: 5
word: $b^1, a^{-1}, b^1, a^{-5}, b^{-2}$
matrix: $[[1, 0], [-90, 400]]$

num: (23, 10)
length: 11
word: $b^1, a^{-1}, b^1, a^{-2}, b^4, a^{-2}, b^2, a^{-1}, b^{-1}, a^{-1}, b^{-30}$
matrix: $[[1, 0], [-8956230, 625000000]]$

num: (27, 10)
length: 11
word: $b^1, a^{-1}, b^1, a^{-1}, b^4, a^{-1}, b^{-2}, a^{-2}, b^{-1}, a^1, b^{-30}$
matrix: $[[1, 0], [-1964470, 156250000]]$

num: (29, 10)
length: 17
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^1, b^1, a^2, b^{-1}, a^{-1}, b^1, a^2, b^3, a^{-1}, b^3, a^{-61}, b^{-10}$
matrix: $[[1, 0], [-21539521635210, 6250000000000000]]$

num: (31, 10)
length: 13
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-2}, b^{-26}, a^{-1}, b^{-1}, a^{-3}, b^3, a^1, b^{-10}$
matrix: $[[1, 0], [-8305625190, 2500000000000]]$

num: (33, 10)
length: 15
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^2, a^1, b^{-1}, a^{-1}, b^{-1}, a^1, b^{-25}, a^1, b^{-110}$
matrix: $[[1, 0], [-2762526130, 10000000000000]]$

num: (37, 10)
length: 57
word: $b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^2, a^3, b^1, a^{-1}, b^1, a^{-1}, b^1, a^{-1}, b^1, a^1, b^{-8}, a^{-1}, b^2, a^{-1}, b^1, a^{-1}, b^1, a^5, b^{-4}, a^1, b^6, a^{-4}, b^{-}$

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3186547880458867218026492780753382322389084903741433248149087976158
2264427621020725139973650164040424482616037693336888023604141528935
4942586147891237756023733979338125530606094529713390614529193713141
1471948157384960310, 625000000]]
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