

# appendix C

## Weil pairing tiny test

---

### C.1 Code listing for tiny test

The program to test field prime value 43 with field extension embedding degree of 2 is listed here. The program finds every point on the base curve and field extension curve, builds a table and an index to keep track of each point the order of each point.

The equation of the curve is

$$E : y^2 = x^3 + 23x - 1 \bmod 43 \quad (\text{C.1})$$

#### Listing C.1 Weil pairing test for tiny field size

```

/*****
*
*   Tiny example to show how field extension works.  Curve was
*   found with brute force search and luck.
*   base prime is 43, number of points on base curve is 11 and
*   Weil pairing works with points of order 11 not on G1.
*
*****/

#include "poly_elliptic.h"
#include "elliptic.h"
#include "pairing.h"

#define M 43

int main(int argc, char *argv[])
{
    FILE *pnts;
    POLY_CURVE Ex;
    CURVE E;

```

```

POLY_POINT Px1, Px2, Qx, Tx;
POINT P1, P2;
mpz_t prm, x, ord, factors[8], tor;
POLY irrd, xtnd, t1, t2, t3, t4;
int i, j, k, m, which, skip;
POLY_POINT table[1815], T, P, Q, S, TpQ;
long *grp;

/* initialize base prime and polynomial */

mpz_init_set_ui(prm, M);
minit(prm);
poly_init(&irrd);
if(poly_irreducible(&irrd, 2))
    poly_printf("Found irreducible polynomial:\n", irrd);
else
    printf("no irreducible polynomial found...\n");
poly_irrd_set(irrd);
poly_mulprep(irrd);

/* find every point on base curve */

pnts = fopen("all_points_prm_43.dat", "w");
curve_init(&E);
mpz_set_ui(E.a4, 23);
mpz_set_ui(E.a6, 42);
poly_curve_init(&Ex);
point_init(&P1);
point_init(&P2);
mpz_inits(x, ord, NULL);
for(i=0; i<8; i++)
    mpz_init(factors[i]);
mpz_set_ui(factors[0], 5);
mpz_set_ui(factors[1], 11);
mpz_set_ui(factors[2], 55);
mpz_set_ui(factors[3], 3);
mpz_set_ui(factors[4], 33);
mpz_set_ui(factors[5], 15);
mpz_set_ui(factors[6], 165);
mpz_set_ui(factors[7], 1815);

i = 1;
j = 0;
while(i<M-1)
{
    mpz_set_ui(x, i);
    elptic_embed(&P1, &P2, x, E);
    get_order(ord, P1, E, factors, 3);
    gmp_fprintf(pnts, "%2d: (%Zd, %Zd) order: %Zd\n", j, P1.x, P1.y, ord);
    j++;
    gmp_fprintf(pnts, "%2d: (%Zd, %Zd)\n", j, P2.x, P2.y);
    j++;
}

```

```

    while(mpz_cmp_ui(P1.x, i) >= 0) i++;
}
fprintf(pnts, "\n");

/* find every point on extension curve */

Ex.a4.deg = 0;
mpz_set_ui(Ex.a4.coef[0], 23);
mpz_set_ui(Ex.a6.coef[0], 42);
poly_point_init(&Px1);
poly_point_init(&Px2);
poly_init(&xtnd);
j = 0;
grp = (long*)malloc(sizeof(long)*2*1815);
while(j < 1814)
{
    poly_elptic_embed(&Px1, &Px2, xtnd, Ex);
    poly_get_order(ordr, Px1, Ex, factors, 8);
    gmp_fprintf(pnts, "%2d: x = ", j);
    if(Px1.x.deg)
        gmp_fprintf(pnts, "%Zd*x + ", Px1.x.coef[1]);
    gmp_fprintf(pnts, "%Zd y = ", Px1.x.coef[0]);
    if(Px1.y.deg)
        gmp_fprintf(pnts, "%Zd*x + ", Px1.y.coef[1]);
    gmp_fprintf(pnts, "%Zd order: %Zd | %ld\n", Px1.y.coef[0], ordr, glg2(Px1));
    poly_point_init(&table[j]);
    poly_point_copy(&table[j], Px1);
    grp[2*j] = glg2(Px1);
    grp[2*j + 1] = mpz_get_ui(ordr);
    j++;
    gmp_fprintf(pnts, "%2d: x = ", j);
    if(Px2.x.deg)
        gmp_fprintf(pnts, "%Zd*x + ", Px2.x.coef[1]);
    gmp_fprintf(pnts, "%Zd y = ", Px2.x.coef[0]);
    if(Px2.y.deg)
        gmp_fprintf(pnts, "%Zd*x + ", Px2.y.coef[1]);
    gmp_fprintf(pnts, "%Zd | %ld\n", Px2.y.coef[0], glg2(Px2));
    poly_point_init(&table[j]);
    poly_point_copy(&table[j], Px2);
    grp[2*j + 1] = glg2(Px2);
    grp[2*j] = mpz_get_ui(ordr);
    j++;
    poly_copy(&xtnd, Px1.x);
    FF_bump(&xtnd);
}
fclose(pnts);

/* check cardinality routine */

mpz_set_si(x, -11);
cardinality(ordr, x, 2);
gmp_printf("cardinality of extension: %Zd\n", ordr);

```

```

k = mpz_get_ui(ordr);
printf("k=%d\n", k);

/* pick 3 independant points and 1 not in same order
   not general - fixed for this problem.

   This is G1 x G1 test */
printf("G1 x G1 test- - - - - \n");
which = 0;
for(i=1; i<k; i++)
{
    if(!which)
    {
        if((grp[2*i] == 11) && (grp[2*i + 1] == 1))
        {
            printf("%d %d\n", which, i);
            poly_point_copy(&P, table[i]);
            which++;
            i++;
        }
        continue;
    }
    if(which == 1)
    {
        if((grp[2*i] == 11) && (grp[2*i + 1] == 1))
        {
            printf("%d %d\n", which, i);
            poly_point_copy(&Q, table[i - 1]);
            which++;
            i++;
        }
        continue;
    }
    if(which == 2)
    {
        if((grp[2*i] == 11) && (grp[2*i + 1] == 1))
        {
            printf("%d %d\n", which, i);
            poly_point_copy(&T, table[i]);
            which++;
            i++;
        }
        continue;
    }
    if(which == 3)
    {
        i=1;
        while(i<k)
        {
            if((grp[2*i] == 55) && (grp[2*i + 1] == 4))
            {

```

```

        printf("%d %d\n", which, i);
        poly_point_copy(&S, table[i]);
        which++;
        break;
    }
    i++;
}
continue;
}
if(which == 4)
    break;
}
poly_point_printf("P:\n", P);
poly_point_printf("Q:\n", Q);
poly_point_printf("T:\n", T);
poly_point_printf("S:\n", S);

/* compute (P,Q) */

mpz_init_set_ui(tor, 11);
poly_init(&t1);
weil(&t1, P, Q, S, tor, Ex);
poly_printf("G1 x G1 weil (P, Q): ", t1);

/* compute (P,T) */

poly_init(&t2);
weil(&t2, P, T, S, tor, Ex);
poly_printf("G1 x G1 weil (P, T): ", t2);

/* compute (P,T+Q) */

poly_point_init(&TpQ);
poly_elptic_sum(&TpQ, T, Q, Ex);
poly_point_printf("T + Q: \n", TpQ);
weil(&t3, P, TpQ, S, tor, Ex);
poly_printf("G1 x G1 weil (P, T+Q): ", t3);

poly_init(&t4);
poly_mul(&t4, t1, t2);
poly_printf("G1 x G1 (P, T)*(P, Q): ", t4);
printf("- - - - - \n\n");

/* This is G1 x G2 test */

printf(" G1 x G2 test- - - - - \n");
which = 0;
for(i=1; i<k; i++)
{
    if(!which)
    {
        if((grp[2*i] == 11) && (grp[2*i + 1] == 1))
        {
            printf("%d %d\n", which, i);

```

```

        poly_point_copy(&P, table[i]);
        which++;
        i++;
    }
    continue;
}
if(which == 1)
{
    if((grp[2*i] == 11) && (grp[2*i + 1] == 4))
    {
        printf("%d %d\n", which, i);
        poly_point_copy(&Q, table[i - 1]);
        which++;
        i+=40;
    }
    continue;
}
if(which == 2)
{
    if((grp[2*i] == 11) && (grp[2*i + 1] == 4))
    {
        printf("%d %d\n", which, i);
        poly_point_copy(&T, table[i]);
        which++;
        i++;
    }
    continue;
}
if(which == 3)
{
    i=1;
    while(i<k)
    {
        if((grp[2*i] == 55) && (grp[2*i + 1] == 4))
        {
            printf("%d %d\n", which, i);
            poly_point_copy(&S, table[i]);
            which++;
            break;
        }
        i++;
    }
    continue;
}
if(which == 4)
    break;
}
if(which != 4) exit(0);
poly_point_printf("P:\n", P);
poly_point_printf("Q:\n", Q);

```

```

    poly_point_printf("T:\n", T);
    poly_point_printf("S:\n", S);

/* compute (P,Q) */

    mpz_init_set_ui(tor, 11);
    poly_init(&t1);
    weil(&t1, P, Q, S, tor, Ex);
    poly_printf("G1 x G2 weil (P, Q): ", t1);

/* compute (P,T) */

    poly_init(&t2);
    weil(&t2, P, T, S, tor, Ex);
    poly_printf("G1 x G2 weil (P, T): ", t2);

/* compute (P,T+Q) */

    poly_point_init(&TpQ);
    poly_elptic_sum(&TpQ, T, Q, Ex);
    poly_point_printf("T + Q: \n", TpQ);
    weil(&t3, P, TpQ, S, tor, Ex);
    poly_printf("G1 x G2 weil (P, T+Q): ", t3);

    poly_init(&t4);
    poly_mul(&t4, t1, t2);
    poly_printf("G1 x G2 weil (P, T)*(P, Q): ", t4);

/* take pairing to torsion power */

    poly_pow(&t2, t4, factors[1]);
    poly_printf("Result to torsion power: ", t2);
    printf("-----\n\n");

/* This is G2 x G2 test */

    printf("G2 x G2 test ----- \n");
    which = 0;
    skip = 0;
    for(i=0; i<k; i++)
    {
        if(!which)
        {
            if((grp[2*i] == 11) && (grp[2*i + 1] == 4))
            {
                printf("%d %d\n", which, i);
                poly_point_copy(&P, table[i]);
                if(!skip)
                    skip++;
            }
            else
            {
                which++;
                i++;
            }
        }
    }
}

```

```

        continue;
    }
    if(which == 1)
    {
        if((grp[2*i] == 11) && (grp[2*i + 1] == 4))
        {
            printf("%d %d\n", which, i);
            poly_point_copy(&Q, table[i - 1]);
            which++;
            i++;
        }
        continue;
    }
    if(which == 2)
    {
        if((grp[2*i] == 11) && (grp[2*i + 1] == 4))
        {
            printf("%d %d\n", which, i);
            poly_point_copy(&T, table[i]);
            which++;
            i++;
        }
        continue;
    }
    if(which == 3)
    {
        i=1;
        while(i<k)
        {
            if((grp[2*i] == 55) && (grp[2*i + 1] == 4))
            {
                printf("%d %d\n", which, i);
                poly_point_copy(&S, table[i]);
                which++;
                break;
            }
            i++;
        }
        continue;
    }
    if(which == 4)
        break;
}
if(which != 4) exit(0);
poly_point_printf("P:\n", P);
poly_point_printf("Q:\n", Q);
poly_point_printf("T:\n", T);
poly_point_printf("S:\n", S);

/* compute (P,Q) */

```



```

    mpz_init_set_ui(tor, 11);
    poly_init(&t1);
    weil(&t1, P, Q, S, tor, Ex);
    poly_printf("G2 x G2 weil (P, Q): ", t1);

/* compute (P,T) */

    poly_init(&t2);
    weil(&t2, P, T, S, tor, Ex);
    poly_printf("G2 x G2 weil (P, T): ", t2);

/* compute (P,T+Q) */

    poly_point_init(&TpQ);
    poly_elptic_sum(&TpQ, T, Q, Ex);
    poly_point_printf("T + Q: \n", TpQ);
    weil(&t3, P, TpQ, S, tor, Ex);
    poly_printf("G2 x G2 weil (P, T+Q): ", t3);

    poly_init(&t4);
    poly_mul(&t4, t1, t2);
    poly_printf("G2 x G2 weil (P, T)*(P, Q): ", t4);

/* take pairing to torsion power */

    poly_pow(&t2, t4, factors[1]);
    poly_printf("Result to torsion power: ", t2);
    printf("\n\n");
}

```

## C.2 Tiny test output

Running the above code outputs a file of points and the tests associated with the Weil pairing. The screen output is in the next listing. The output format is designed to cut and paste directly into PARI/gp for debugging and verification.

### Listing C.2 Tiny test printout

```

$ ./weil_6_bit_pairing
Found irreducible polynomial:
Mod(1, 43)*x^2 + Mod(1, 43)*x^1 + Mod(3, 43)

cardinality of extension: 1815
k=1815
G1 x G1 test- - - - -
0 7
1 23
2 49
3 87
P:
x: Mod(3, 43)
y: Mod(40, 43)

```

Q:

x: Mod(11, 43)

y: Mod(11, 43)

T:

x: Mod(24, 43)

y: Mod(23, 43)

S:

x: Mod(1, 43)\*x<sup>1</sup> + Mod(0, 43)

y: Mod(22, 43)\*x<sup>1</sup> + Mod(32, 43)

G1 x G1 weil (P, Q): Mod(1, 43)

G1 x G1 weil (P, T): Mod(1, 43)

T + Q:

x: Mod(3, 43)

y: Mod(3, 43)

G1 x G1 weil (P, T+Q): Mod(1, 43)

G1 x G1 (P, T)\*(P, Q): Mod(1, 43)

- - - - -

G1 x G2 test- - - - -

0 7

1 93

2 165

3 87

P:

x: Mod(3, 43)

y: Mod(40, 43)

Q:

x: Mod(1, 43)\*x<sup>1</sup> + Mod(4, 43)

y: Mod(15, 43)\*x<sup>1</sup> + Mod(18, 43)

T:

x: Mod(3, 43)\*x<sup>1</sup> + Mod(1, 43)

y: Mod(41, 43)\*x<sup>1</sup> + Mod(32, 43)

S:

x: Mod(1, 43)\*x<sup>1</sup> + Mod(0, 43)

y: Mod(22, 43)\*x<sup>1</sup> + Mod(32, 43)

G1 x G2 weil (P, Q): Mod(36, 43)\*x<sup>1</sup> + Mod(25, 43)

G1 x G2 weil (P, T): Mod(11, 43)\*x<sup>1</sup> + Mod(2, 43)

T + Q:

```

x: Mod(24, 43)*x^1 + Mod(36, 43)
y: Mod(6, 43)*x^1 + Mod(36, 43)
G1 x G2 weil (P, T+Q): Mod(37, 43)*x^1 + Mod(23, 43)
G1 x G2 weil (P, T)*(P, Q): Mod(37, 43)*x^1 + Mod(23, 43)
Result to torsion power: Mod(1, 43)

```

```

- - - - -
G2 x G2 test - - - - -
0 93
0 127
1 165
2 181
3 87
P:
x: Mod(1, 43)*x^1 + Mod(39, 43)
y: Mod(39, 43)*x^1 + Mod(4, 43)
Q:
x: Mod(3, 43)*x^1 + Mod(1, 43)
y: Mod(2, 43)*x^1 + Mod(11, 43)
T:
x: Mod(3, 43)*x^1 + Mod(16, 43)
y: Mod(41, 43)*x^1 + Mod(11, 43)
S:
x: Mod(1, 43)*x^1 + Mod(0, 43)
y: Mod(22, 43)*x^1 + Mod(32, 43)
G2 x G2 weil (P, Q): Mod(34, 43)*x^1 + Mod(19, 43)
G2 x G2 weil (P, T): Mod(11, 43)*x^1 + Mod(2, 43)
T + Q:
x: Mod(1, 43)*x^1 + Mod(4, 43)
y: Mod(28, 43)*x^1 + Mod(25, 43)
G2 x G2 weil (P, T+Q): Mod(32, 43)*x^1 + Mod(34, 43)
G2 x G2 weil (P, T)*(P, Q): Mod(32, 43)*x^1 + Mod(34, 43)
Result to torsion power: Mod(1, 43)

```

### C.3 *Tiny test list of all points*

The file `all_points_prm_43.dat` contains every point on the tiny curve. The following shows those points. The points on the base curve are listed first. The points on the field extension are listed after that. All the points on the base curve are also on the field extension. The number after the `|` is 1 if the  $x$  and  $y$  values are not polynomials. It is 2 if  $x$  is a

polynomial and  $y$  is not, 3 if  $x$  is not a polynomial but  $y$  is and 4 if both  $x$  and  $y$  are polynomials. For the number 1, these are  $G_1$  points. For numbers 2, 3 and 4 these are  $G_2$  points.

### Listing C.3 File all\_points\_prm\_43.dat

```

0: (1, 18) order: 5
1: (1, 25)
2: (2, 15) order: 55
3: (2, 28)
4: (3, 3) order: 11
5: (3, 40)
6: (5, 14) order: 55
7: (5, 29)
8: (6, 3) order: 55
9: (6, 40)
10: (10, 5) order: 55
11: (10, 38)
12: (11, 11) order: 11
13: (11, 32)
14: (12, 5) order: 55
15: (12, 38)
16: (13, 1) order: 55
17: (13, 42)
18: (15, 8) order: 55
19: (15, 35)
20: (17, 10) order: 55
21: (17, 33)
22: (18, 15) order: 55
23: (18, 28)
24: (20, 17) order: 55
25: (20, 26)
26: (21, 5) order: 55
27: (21, 38)
28: (22, 4) order: 55
29: (22, 39)
30: (23, 15) order: 55
31: (23, 28)
32: (24, 20) order: 11
33: (24, 23)
34: (25, 17) order: 11
35: (25, 26)
36: (30, 13) order: 11
37: (30, 30)
38: (31, 4) order: 55
39: (31, 39)
40: (32, 7) order: 55
41: (32, 36)
42: (33, 4) order: 55

```

```

43: (33, 39)
44: (34, 3) order: 55
45: (34, 40)
46: (36, 21) order: 55
47: (36, 22)
48: (38, 19) order: 55
49: (38, 24)
50: (39, 12) order: 5
51: (39, 31)
52: (41, 17) order: 55
53: (41, 26)

0: x = 0  y = 4*x + 2  order: 11 | 3
1: x = 0  y = 39*x + 41 | 3
2: x = 1  y = 18  order: 5 | 1
3: x = 1  y = 25 | 1
4: x = 2  y = 15  order: 55 | 1
5: x = 2  y = 28 | 1
6: x = 3  y = 3  order: 11 | 1
7: x = 3  y = 40 | 1
8: x = 4  y = 10*x + 5  order: 33 | 3
9: x = 4  y = 33*x + 38 | 3
10: x = 5  y = 14  order: 55 | 1
11: x = 5  y = 29 | 1
12: x = 6  y = 3  order: 55 | 1
13: x = 6  y = 40 | 1
14: x = 7  y = 6*x + 3  order: 33 | 3
15: x = 7  y = 37*x + 40 | 3
16: x = 8  y = 19*x + 31  order: 33 | 3
17: x = 8  y = 24*x + 12 | 3
18: x = 9  y = 2*x + 1  order: 33 | 3
19: x = 9  y = 41*x + 42 | 3
20: x = 10  y = 5  order: 55 | 1
21: x = 10  y = 38 | 1
22: x = 11  y = 11  order: 11 | 1
23: x = 11  y = 32 | 1
24: x = 12  y = 5  order: 55 | 1
25: x = 12  y = 38 | 1
26: x = 13  y = 1  order: 55 | 1
27: x = 13  y = 42 | 1
28: x = 14  y = 18*x + 9  order: 3 | 3
29: x = 14  y = 25*x + 34 | 3
30: x = 15  y = 8  order: 55 | 1
31: x = 15  y = 35 | 1
32: x = 16  y = 12*x + 6  order: 11 | 3
33: x = 16  y = 31*x + 37 | 3
34: x = 17  y = 10  order: 55 | 1
35: x = 17  y = 33 | 1
36: x = 18  y = 15  order: 55 | 1
37: x = 18  y = 28 | 1

```

```

38: x = 19  y = 5*x + 24  order: 33 | 3
39: x = 19  y = 38*x + 19 | 3
40: x = 20  y = 17  order: 55 | 1
41: x = 20  y = 26 | 1
42: x = 21  y = 5  order: 55 | 1
43: x = 21  y = 38 | 1
44: x = 22  y = 4  order: 55 | 1
45: x = 22  y = 39 | 1
46: x = 23  y = 15  order: 55 | 1
47: x = 23  y = 28 | 1
48: x = 24  y = 20  order: 11 | 1
49: x = 24  y = 23 | 1
50: x = 25  y = 17  order: 11 | 1
51: x = 25  y = 26 | 1
52: x = 26  y = 16*x + 8  order: 33 | 3
53: x = 26  y = 27*x + 35 | 3
54: x = 27  y = 19*x + 31  order: 33 | 3
55: x = 27  y = 24*x + 12 | 3
56: x = 28  y = 14*x + 7  order: 33 | 3
57: x = 28  y = 29*x + 36 | 3
58: x = 29  y = 3*x + 23  order: 11 | 3
59: x = 29  y = 40*x + 20 | 3
60: x = 30  y = 13  order: 11 | 1
61: x = 30  y = 30 | 1
62: x = 31  y = 4  order: 55 | 1
63: x = 31  y = 39 | 1
64: x = 32  y = 7  order: 55 | 1
65: x = 32  y = 36 | 1
66: x = 33  y = 4  order: 55 | 1
67: x = 33  y = 39 | 1
68: x = 34  y = 3  order: 55 | 1
69: x = 34  y = 40 | 1
70: x = 35  y = 12*x + 6  order: 11 | 3
71: x = 35  y = 31*x + 37 | 3
72: x = 36  y = 21  order: 55 | 1
73: x = 36  y = 22 | 1
74: x = 37  y = 2*x + 1  order: 33 | 3
75: x = 37  y = 41*x + 42 | 3
76: x = 38  y = 19  order: 55 | 1
77: x = 38  y = 24 | 1
78: x = 39  y = 12  order: 5 | 1
79: x = 39  y = 31 | 1
80: x = 40  y = 2*x + 1  order: 11 | 3
81: x = 40  y = 41*x + 42 | 3
82: x = 41  y = 17  order: 55 | 1
83: x = 41  y = 26 | 1
84: x = 42  y = 20*x + 10  order: 33 | 3
85: x = 42  y = 23*x + 33 | 3
86: x = 1*x + 0  y = 21*x + 11  order: 55 | 4
87: x = 1*x + 0  y = 22*x + 32 | 4

```

```

88: x = 1*x + 2  y = 4*x + 0  order: 165 | 4
89: x = 1*x + 2  y = 39*x + 0 | 4
90: x = 1*x + 3  y = 19*x + 6  order: 165 | 4
91: x = 1*x + 3  y = 24*x + 37 | 4
92: x = 1*x + 4  y = 15*x + 18  order: 11 | 4
93: x = 1*x + 4  y = 28*x + 25 | 4
94: x = 1*x + 7  y = 9*x + 27  order: 33 | 4
95: x = 1*x + 7  y = 34*x + 16 | 4
96: x = 1*x + 10 y = 5*x + 23  order: 165 | 4
97: x = 1*x + 10 y = 38*x + 20 | 4
98: x = 1*x + 11 y = 10*x + 29  order: 165 | 4
99: x = 1*x + 11 y = 33*x + 14 | 4
100: x = 1*x + 15 y = 14*x + 41  order: 165 | 4
101: x = 1*x + 15 y = 29*x + 2 | 4
102: x = 1*x + 17 y = 9*x + 8  order: 55 | 4
103: x = 1*x + 17 y = 34*x + 35 | 4
104: x = 1*x + 19 y = 3*x + 4  order: 55 | 4
105: x = 1*x + 19 y = 40*x + 39 | 4
106: x = 1*x + 20 y = 10*x + 5  order: 165 | 4
107: x = 1*x + 20 y = 33*x + 38 | 4
108: x = 1*x + 22 y = 19*x + 42  order: 165 | 4
109: x = 1*x + 22 y = 24*x + 1 | 4
110: x = 1*x + 23 y = 18*x + 41  order: 55 | 4
111: x = 1*x + 23 y = 25*x + 2 | 4
112: x = 1*x + 24 y = 12  order: 15 | 2
113: x = 1*x + 24 y = 31 | 2
114: x = 1*x + 25 y = 2*x + 37  order: 165 | 4
115: x = 1*x + 25 y = 41*x + 6 | 4
116: x = 1*x + 26 y = 8*x + 17  order: 55 | 4
117: x = 1*x + 26 y = 35*x + 26 | 4
118: x = 1*x + 27 y = 21*x + 12  order: 55 | 4
119: x = 1*x + 27 y = 22*x + 31 | 4
120: x = 1*x + 29 y = 12*x + 17  order: 165 | 4
121: x = 1*x + 29 y = 31*x + 26 | 4
122: x = 1*x + 35 y = 8*x + 0  order: 165 | 4
123: x = 1*x + 35 y = 35*x + 0 | 4
124: x = 1*x + 37 y = 17*x + 28  order: 55 | 4
125: x = 1*x + 37 y = 26*x + 15 | 4
126: x = 1*x + 39 y = 4*x + 39  order: 11 | 4
127: x = 1*x + 39 y = 39*x + 4 | 4
128: x = 1*x + 40 y = 2*x + 26  order: 33 | 4
129: x = 1*x + 40 y = 41*x + 17 | 4
130: x = 1*x + 41 y = 6*x + 17  order: 165 | 4
131: x = 1*x + 41 y = 37*x + 26 | 4
132: x = 1*x + 42 y = 16*x + 29  order: 165 | 4
133: x = 1*x + 42 y = 27*x + 14 | 4
134: x = 2*x + 2  y = 18*x + 17  order: 55 | 4
135: x = 2*x + 2  y = 25*x + 26 | 4
136: x = 2*x + 5  y = 13*x + 26  order: 165 | 4
137: x = 2*x + 5  y = 30*x + 17 | 4

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138: x = 2*x + 11  y = 9*x + 32  order: 33 | 4
139: x = 2*x + 11  y = 34*x + 11 | 4
140: x = 2*x + 13  y = 19*x + 34  order: 165 | 4
141: x = 2*x + 13  y = 24*x + 9 | 4
142: x = 2*x + 14  y = 2*x + 24  order: 165 | 4
143: x = 2*x + 14  y = 41*x + 19 | 4
144: x = 2*x + 15  y = 5*x + 15  order: 55 | 4
145: x = 2*x + 15  y = 38*x + 28 | 4
146: x = 2*x + 19  y = 15*x + 0  order: 55 | 4
147: x = 2*x + 19  y = 28*x + 0 | 4
148: x = 2*x + 20  y = 2*x + 11  order: 55 | 4
149: x = 2*x + 20  y = 41*x + 32 | 4
150: x = 2*x + 21  y = 9*x + 3  order: 165 | 4
151: x = 2*x + 21  y = 34*x + 40 | 4
152: x = 2*x + 22  y = 7*x + 13  order: 33 | 4
153: x = 2*x + 22  y = 36*x + 30 | 4
154: x = 2*x + 30  y = 21*x + 36  order: 165 | 4
155: x = 2*x + 30  y = 22*x + 7 | 4
156: x = 2*x + 33  y = 2*x + 38  order: 165 | 4
157: x = 2*x + 33  y = 41*x + 5 | 4
158: x = 2*x + 35  y = 19*x + 15  order: 165 | 4
159: x = 2*x + 35  y = 24*x + 28 | 4
160: x = 2*x + 38  y = 15*x + 37  order: 165 | 4
161: x = 2*x + 38  y = 28*x + 6 | 4
162: x = 2*x + 39  y = 3*x + 9  order: 55 | 4
163: x = 2*x + 39  y = 40*x + 34 | 4
164: x = 3*x + 1  y = 2*x + 11  order: 11 | 4
165: x = 3*x + 1  y = 41*x + 32 | 4
166: x = 3*x + 4  y = 18*x + 14  order: 165 | 4
167: x = 3*x + 4  y = 25*x + 29 | 4
168: x = 3*x + 7  y = 17*x + 29  order: 55 | 4
169: x = 3*x + 7  y = 26*x + 14 | 4
170: x = 3*x + 9  y = 16*x + 25  order: 55 | 4
171: x = 3*x + 9  y = 27*x + 18 | 4
172: x = 3*x + 10 y = 16*x + 8  order: 165 | 4
173: x = 3*x + 10 y = 27*x + 35 | 4
174: x = 3*x + 12 y = 11*x + 23  order: 165 | 4
175: x = 3*x + 12 y = 32*x + 20 | 4
176: x = 3*x + 14 y = 6*x + 23  order: 165 | 4
177: x = 3*x + 14 y = 37*x + 20 | 4
178: x = 3*x + 15 y = 11*x + 29  order: 165 | 4
179: x = 3*x + 15 y = 32*x + 14 | 4
180: x = 3*x + 16 y = 2*x + 32  order: 11 | 4
181: x = 3*x + 16 y = 41*x + 11 | 4
182: x = 3*x + 21 y = 20*x + 32  order: 165 | 4
183: x = 3*x + 21 y = 23*x + 11 | 4
184: x = 3*x + 23 y = 17*x + 27  order: 165 | 4
185: x = 3*x + 23 y = 26*x + 16 | 4
186: x = 3*x + 25 y = 12*x + 14  order: 55 | 4
187: x = 3*x + 25 y = 31*x + 29 | 4

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188: x = 3*x + 26  y = 8*x + 0  order: 33 | 4
189: x = 3*x + 26  y = 35*x + 0 | 4
190: x = 3*x + 32  y = 10*x + 17  order: 165 | 4
191: x = 3*x + 32  y = 33*x + 26 | 4
192: x = 3*x + 33  y = 12*x + 7  order: 165 | 4
193: x = 3*x + 33  y = 31*x + 36 | 4
194: x = 3*x + 35  y = 10*x + 26  order: 33 | 4
195: x = 3*x + 35  y = 33*x + 17 | 4
196: x = 3*x + 36  y = 10  order: 55 | 2
197: x = 3*x + 36  y = 33 | 2
198: x = 3*x + 38  y = 18*x + 23  order: 165 | 4
199: x = 3*x + 38  y = 25*x + 20 | 4
200: x = 4*x + 0  y = 16*x + 23  order: 165 | 4
201: x = 4*x + 0  y = 27*x + 20 | 4
202: x = 4*x + 3  y = 19*x + 11  order: 165 | 4
203: x = 4*x + 3  y = 24*x + 32 | 4
204: x = 4*x + 4  y = 12*x + 26  order: 165 | 4
205: x = 4*x + 4  y = 31*x + 17 | 4
206: x = 4*x + 5  y = 9*x + 13  order: 55 | 4
207: x = 4*x + 5  y = 34*x + 30 | 4
208: x = 4*x + 9  y = 16*x + 13  order: 165 | 4
209: x = 4*x + 9  y = 27*x + 30 | 4
210: x = 4*x + 11 y = 15*x + 7  order: 165 | 4
211: x = 4*x + 11 y = 28*x + 36 | 4
212: x = 4*x + 12 y = 11*x + 23  order: 165 | 4
213: x = 4*x + 12 y = 32*x + 20 | 4
214: x = 4*x + 14 y = 8*x + 10  order: 165 | 4
215: x = 4*x + 14 y = 35*x + 33 | 4
216: x = 4*x + 19 y = 12*x + 18  order: 165 | 4
217: x = 4*x + 19 y = 31*x + 25 | 4
218: x = 4*x + 21 y = 9*x + 4  order: 165 | 4
219: x = 4*x + 21 y = 34*x + 39 | 4
220: x = 4*x + 22 y = 1*x + 15  order: 55 | 4
221: x = 4*x + 22 y = 42*x + 28 | 4
222: x = 4*x + 23 y = 8*x + 7  order: 55 | 4
223: x = 4*x + 23 y = 35*x + 36 | 4
224: x = 4*x + 24 y = 11*x + 37  order: 165 | 4
225: x = 4*x + 24 y = 32*x + 6 | 4
226: x = 4*x + 25 y = 8*x + 30  order: 165 | 4
227: x = 4*x + 25 y = 35*x + 13 | 4
228: x = 4*x + 26 y = 20*x + 13  order: 55 | 4
229: x = 4*x + 26 y = 23*x + 30 | 4
230: x = 4*x + 29 y = 8*x + 8  order: 55 | 4
231: x = 4*x + 29 y = 35*x + 35 | 4
232: x = 4*x + 30 y = 3*x + 29  order: 165 | 4
233: x = 4*x + 30 y = 40*x + 14 | 4
234: x = 4*x + 31 y = 16*x + 9  order: 165 | 4
235: x = 4*x + 31 y = 27*x + 34 | 4
236: x = 4*x + 37 y = 20*x + 40  order: 165 | 4
237: x = 4*x + 37 y = 23*x + 3 | 4

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238: x = 4*x + 38  y = 15*x + 20  order: 165 | 4
239: x = 4*x + 38  y = 28*x + 23 | 4
240: x = 4*x + 42  y = 16*x + 41  order: 55 | 4
241: x = 4*x + 42  y = 27*x + 2 | 4
242: x = 5*x + 4   y = 18*x + 0   order: 165 | 4
243: x = 5*x + 4   y = 25*x + 0 | 4
244: x = 5*x + 7   y = 6*x + 20  order: 165 | 4
245: x = 5*x + 7   y = 37*x + 23 | 4
246: x = 5*x + 12  y = 13*x + 20  order: 165 | 4
247: x = 5*x + 12  y = 30*x + 23 | 4
248: x = 5*x + 13  y = 7*x + 7   order: 165 | 4
249: x = 5*x + 13  y = 36*x + 36 | 4
250: x = 5*x + 14  y = 2*x + 42  order: 165 | 4
251: x = 5*x + 14  y = 41*x + 1 | 4
252: x = 5*x + 17  y = 5*x + 37  order: 55 | 4
253: x = 5*x + 17  y = 38*x + 6 | 4
254: x = 5*x + 19  y = 12*x + 0   order: 165 | 4
255: x = 5*x + 19  y = 31*x + 0 | 4
256: x = 5*x + 20  y = 11*x + 28  order: 165 | 4
257: x = 5*x + 20  y = 32*x + 15 | 4
258: x = 5*x + 22  y = 20*x + 34  order: 55 | 4
259: x = 5*x + 22  y = 23*x + 9 | 4
260: x = 5*x + 24  y = 16*x + 20  order: 33 | 4
261: x = 5*x + 24  y = 27*x + 23 | 4
262: x = 5*x + 26  y = 7*x + 26  order: 55 | 4
263: x = 5*x + 26  y = 36*x + 17 | 4
264: x = 5*x + 27  y = 2*x + 34  order: 55 | 4
265: x = 5*x + 27  y = 41*x + 9 | 4
266: x = 5*x + 28  y = 7*x + 2   order: 165 | 4
267: x = 5*x + 28  y = 36*x + 41 | 4
268: x = 5*x + 32  y = 13*x + 40  order: 165 | 4
269: x = 5*x + 32  y = 30*x + 3 | 4
270: x = 5*x + 35  y = 4*x + 35  order: 55 | 4
271: x = 5*x + 35  y = 39*x + 8 | 4
272: x = 5*x + 37  y = 10*x + 37  order: 55 | 4
273: x = 5*x + 37  y = 33*x + 6 | 4
274: x = 5*x + 40  y = 7*x + 38  order: 33 | 4
275: x = 5*x + 40  y = 36*x + 5 | 4
276: x = 6*x + 3   y = 2*x + 16  order: 11 | 4
277: x = 6*x + 3   y = 41*x + 27 | 4
278: x = 6*x + 6   y = 19*x + 21  order: 165 | 4
279: x = 6*x + 6   y = 24*x + 22 | 4
280: x = 6*x + 8   y = 16*x + 32  order: 55 | 4
281: x = 6*x + 8   y = 27*x + 11 | 4
282: x = 6*x + 10  y = 20*x + 40  order: 55 | 4
283: x = 6*x + 10  y = 23*x + 3 | 4
284: x = 6*x + 12  y = 17*x + 19  order: 165 | 4
285: x = 6*x + 12  y = 26*x + 24 | 4
286: x = 6*x + 14  y = 6*x + 39  order: 165 | 4
287: x = 6*x + 14  y = 37*x + 4 | 4

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288: x = 6*x + 17  y = 2*x + 38  order: 165 | 4
289: x = 6*x + 17  y = 41*x + 5  | 4
290: x = 6*x + 18  y = 3*x + 20  order: 33 | 4
291: x = 6*x + 18  y = 40*x + 23 | 4
292: x = 6*x + 22  y = 7*x + 2  order: 165 | 4
293: x = 6*x + 22  y = 36*x + 41 | 4
294: x = 6*x + 24  y = 18  order: 55 | 2
295: x = 6*x + 24  y = 25 | 2
296: x = 6*x + 25  y = 20*x + 10  order: 165 | 4
297: x = 6*x + 25  y = 23*x + 33 | 4
298: x = 6*x + 26  y = 7*x + 3  order: 55 | 4
299: x = 6*x + 26  y = 36*x + 40 | 4
300: x = 6*x + 27  y = 11*x + 28  order: 165 | 4
301: x = 6*x + 27  y = 32*x + 15 | 4
302: x = 6*x + 30  y = 7*x + 39  order: 33 | 4
303: x = 6*x + 30  y = 36*x + 4  | 4
304: x = 6*x + 31  y = 1*x + 13  order: 165 | 4
305: x = 6*x + 31  y = 42*x + 30 | 4
306: x = 6*x + 34  y = 17*x + 22  order: 55 | 4
307: x = 6*x + 34  y = 26*x + 21 | 4
308: x = 6*x + 35  y = 16*x + 0  order: 165 | 4
309: x = 6*x + 35  y = 27*x + 0  | 4
310: x = 6*x + 36  y = 7*x + 35  order: 165 | 4
311: x = 6*x + 36  y = 36*x + 8  | 4
312: x = 7*x + 2   y = 19*x + 6  order: 165 | 4
313: x = 7*x + 2   y = 24*x + 37 | 4
314: x = 7*x + 5   y = 6*x + 17  order: 33 | 4
315: x = 7*x + 5   y = 37*x + 26 | 4
316: x = 7*x + 7   y = 10*x + 11  order: 33 | 4
317: x = 7*x + 7   y = 33*x + 32 | 4
318: x = 7*x + 8   y = 13*x + 6  order: 165 | 4
319: x = 7*x + 8   y = 30*x + 37 | 4
320: x = 7*x + 9   y = 21*x + 7  order: 165 | 4
321: x = 7*x + 9   y = 22*x + 36 | 4
322: x = 7*x + 11  y = 20*x + 6  order: 165 | 4
323: x = 7*x + 11  y = 23*x + 37 | 4
324: x = 7*x + 13  y = 19*x + 32  order: 165 | 4
325: x = 7*x + 13  y = 24*x + 11 | 4
326: x = 7*x + 15  y = 9*x + 15  order: 165 | 4
327: x = 7*x + 15  y = 34*x + 28 | 4
328: x = 7*x + 16  y = 6*x + 7  order: 33 | 4
329: x = 7*x + 16  y = 37*x + 36 | 4
330: x = 7*x + 17  y = 4*x + 1  order: 165 | 4
331: x = 7*x + 17  y = 39*x + 42 | 4
332: x = 7*x + 19  y = 7*x + 7  order: 165 | 4
333: x = 7*x + 19  y = 36*x + 36 | 4
334: x = 7*x + 26  y = 11*x + 31  order: 33 | 4
335: x = 7*x + 26  y = 32*x + 12 | 4
336: x = 7*x + 29  y = 21*x + 16  order: 165 | 4
337: x = 7*x + 29  y = 22*x + 27 | 4

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338: x = 7*x + 30  y = 17*x + 12  order: 55 | 4
339: x = 7*x + 30  y = 26*x + 31 | 4
340: x = 7*x + 31  y = 4*x + 35   order: 165 | 4
341: x = 7*x + 31  y = 39*x + 8  | 4
342: x = 7*x + 34  y = 12*x + 8   order: 55 | 4
343: x = 7*x + 34  y = 31*x + 35 | 4
344: x = 7*x + 36  y = 18*x + 5   order: 165 | 4
345: x = 7*x + 36  y = 25*x + 38 | 4
346: x = 7*x + 39  y = 13*x + 2   order: 165 | 4
347: x = 7*x + 39  y = 30*x + 41 | 4
348: x = 7*x + 42  y = 3*x + 28   order: 165 | 4
349: x = 7*x + 42  y = 40*x + 15 | 4
350: x = 8*x + 0   y = 16*x + 14   order: 165 | 4
351: x = 8*x + 0   y = 27*x + 29 | 4
352: x = 8*x + 1   y = 2*x + 7    order: 55 | 4
353: x = 8*x + 1   y = 41*x + 36 | 4
354: x = 8*x + 3   y = 19*x + 13   order: 33 | 4
355: x = 8*x + 3   y = 24*x + 30 | 4
356: x = 8*x + 5   y = 6*x + 32   order: 55 | 4
357: x = 8*x + 5   y = 37*x + 11 | 4
358: x = 8*x + 6   y = 5*x + 23   order: 165 | 4
359: x = 8*x + 6   y = 38*x + 20 | 4
360: x = 8*x + 8   y = 3*x + 12   order: 165 | 4
361: x = 8*x + 8   y = 40*x + 31 | 4
362: x = 8*x + 9   y = 10*x + 34  order: 165 | 4
363: x = 8*x + 9   y = 33*x + 9   | 4
364: x = 8*x + 13  y = 2*x + 9    order: 165 | 4
365: x = 8*x + 13  y = 41*x + 34 | 4
366: x = 8*x + 14  y = 8*x + 13   order: 11 | 4
367: x = 8*x + 14  y = 35*x + 30 | 4
368: x = 8*x + 15  y = 12*x + 33  order: 55 | 4
369: x = 8*x + 15  y = 31*x + 10 | 4
370: x = 8*x + 16  y = 4*x + 23   order: 33 | 4
371: x = 8*x + 16  y = 39*x + 20 | 4
372: x = 8*x + 17  y = 1*x + 19   order: 165 | 4
373: x = 8*x + 17  y = 42*x + 24 | 4
374: x = 8*x + 22  y = 15*x + 41   order: 33 | 4
375: x = 8*x + 22  y = 28*x + 2   | 4
376: x = 8*x + 25  y = 14*x + 28   order: 165 | 4
377: x = 8*x + 25  y = 29*x + 15 | 4
378: x = 8*x + 28  y = 11*x + 29   order: 33 | 4
379: x = 8*x + 28  y = 32*x + 14 | 4
380: x = 8*x + 30  y = 7*x + 3    order: 165 | 4
381: x = 8*x + 30  y = 36*x + 40 | 4
382: x = 8*x + 32  y = 17*x + 39   order: 33 | 4
383: x = 8*x + 32  y = 26*x + 4   | 4
384: x = 8*x + 35  y = 8*x + 36   order: 33 | 4
385: x = 8*x + 35  y = 35*x + 7   | 4
386: x = 8*x + 36  y = 9*x + 19   order: 165 | 4
387: x = 8*x + 36  y = 34*x + 24 | 4

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388: x = 8*x + 38  y = 12*x + 36  order: 165 | 4
389: x = 8*x + 38  y = 31*x + 7  | 4
390: x = 8*x + 40  y = 18*x + 22  order: 33 | 4
391: x = 8*x + 40  y = 25*x + 21  | 4
392: x = 8*x + 42  y = 14*x + 40  order: 165 | 4
393: x = 8*x + 42  y = 29*x + 3  | 4
394: x = 9*x + 1   y = 15*x + 36  order: 165 | 4
395: x = 9*x + 1   y = 28*x + 7  | 4
396: x = 9*x + 2   y = 21*x + 27  order: 165 | 4
397: x = 9*x + 2   y = 22*x + 16  | 4
398: x = 9*x + 6   y = 8*x + 11  order: 165 | 4
399: x = 9*x + 6   y = 35*x + 32  | 4
400: x = 9*x + 9   y = 15*x + 26  order: 165 | 4
401: x = 9*x + 9   y = 28*x + 17  | 4
402: x = 9*x + 10  y = 14*x + 38  order: 165 | 4
403: x = 9*x + 10  y = 29*x + 5  | 4
404: x = 9*x + 13  y = 8*x + 27  order: 55 | 4
405: x = 9*x + 13  y = 35*x + 16  | 4
406: x = 9*x + 14  y = 11*x + 15  order: 55 | 4
407: x = 9*x + 14  y = 32*x + 28  | 4
408: x = 9*x + 18  y = 2*x + 40  order: 165 | 4
409: x = 9*x + 18  y = 41*x + 3  | 4
410: x = 9*x + 19  y = 17*x + 29  order: 11 | 4
411: x = 9*x + 19  y = 26*x + 14  | 4
412: x = 9*x + 21  y = 14*x + 41  order: 165 | 4
413: x = 9*x + 21  y = 29*x + 2  | 4
414: x = 9*x + 22  y = 12*x + 23  order: 165 | 4
415: x = 9*x + 22  y = 31*x + 20  | 4
416: x = 9*x + 25  y = 9*x + 19  order: 33 | 4
417: x = 9*x + 25  y = 34*x + 24  | 4
418: x = 9*x + 27  y = 12*x + 33  order: 165 | 4
419: x = 9*x + 27  y = 31*x + 10  | 4
420: x = 9*x + 28  y = 20*x + 25  order: 165 | 4
421: x = 9*x + 28  y = 23*x + 18  | 4
422: x = 9*x + 30  y = 15*x + 34  order: 55 | 4
423: x = 9*x + 30  y = 28*x + 9  | 4
424: x = 9*x + 31  y = 12*x + 17  order: 11 | 4
425: x = 9*x + 31  y = 31*x + 26  | 4
426: x = 9*x + 32  y = 9*x + 7   order: 165 | 4
427: x = 9*x + 32  y = 34*x + 36  | 4
428: x = 9*x + 36  y = 5*x + 25  order: 165 | 4
429: x = 9*x + 36  y = 38*x + 18  | 4
430: x = 9*x + 37  y = 12*x + 39  order: 55 | 4
431: x = 9*x + 37  y = 31*x + 4  | 4
432: x = 9*x + 40  y = 3*x + 41  order: 165 | 4
433: x = 9*x + 40  y = 40*x + 2  | 4
434: x = 9*x + 42  y = 20*x + 36  order: 165 | 4
435: x = 9*x + 42  y = 23*x + 7  | 4
436: x = 10*x + 1  y = 11*x + 32  order: 165 | 4
437: x = 10*x + 1  y = 32*x + 11  | 4

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438: x = 10*x + 5   y = 2*x + 16   order: 165 | 4
439: x = 10*x + 5   y = 41*x + 27 | 4
440: x = 10*x + 6   y = 20*x + 23   order: 165 | 4
441: x = 10*x + 6   y = 23*x + 20 | 4
442: x = 10*x + 7   y = 18*x + 14   order: 55 | 4
443: x = 10*x + 7   y = 25*x + 29 | 4
444: x = 10*x + 10  y = 2*x + 10   order: 165 | 4
445: x = 10*x + 10  y = 41*x + 33 | 4
446: x = 10*x + 11  y = 19*x + 18   order: 55 | 4
447: x = 10*x + 11  y = 24*x + 25 | 4
448: x = 10*x + 13  y = 14*x + 4   order: 55 | 4
449: x = 10*x + 13  y = 29*x + 39 | 4
450: x = 10*x + 14  y = 15*x + 26   order: 165 | 4
451: x = 10*x + 14  y = 28*x + 17 | 4
452: x = 10*x + 15  y = 1*x + 4   order: 165 | 4
453: x = 10*x + 15  y = 42*x + 39 | 4
454: x = 10*x + 17  y = 14*x + 16   order: 165 | 4
455: x = 10*x + 17  y = 29*x + 27 | 4
456: x = 10*x + 20  y = 7*x + 20   order: 165 | 4
457: x = 10*x + 20  y = 36*x + 23 | 4
458: x = 10*x + 21  y = 11   order: 33 | 2
459: x = 10*x + 21  y = 32 | 2
460: x = 10*x + 22  y = 17*x + 6   order: 165 | 4
461: x = 10*x + 22  y = 26*x + 37 | 4
462: x = 10*x + 25  y = 13*x + 42   order: 165 | 4
463: x = 10*x + 25  y = 30*x + 1 | 4
464: x = 10*x + 26  y = 13*x + 0   order: 165 | 4
465: x = 10*x + 26  y = 30*x + 0 | 4
466: x = 10*x + 32  y = 7   order: 165 | 2
467: x = 10*x + 32  y = 36 | 2
468: x = 10*x + 36  y = 12*x + 38   order: 165 | 4
469: x = 10*x + 36  y = 31*x + 5 | 4
470: x = 10*x + 37  y = 5*x + 6   order: 165 | 4
471: x = 10*x + 37  y = 38*x + 37 | 4
472: x = 10*x + 38  y = 5*x + 29   order: 55 | 4
473: x = 10*x + 38  y = 38*x + 14 | 4
474: x = 11*x + 1   y = 1*x + 7   order: 11 | 4
475: x = 11*x + 1   y = 42*x + 36 | 4
476: x = 11*x + 2   y = 16*x + 23   order: 165 | 4
477: x = 11*x + 2   y = 27*x + 20 | 4
478: x = 11*x + 3   y = 12*x + 7   order: 33 | 4
479: x = 11*x + 3   y = 31*x + 36 | 4
480: x = 11*x + 4   y = 7*x + 5   order: 55 | 4
481: x = 11*x + 4   y = 36*x + 38 | 4
482: x = 11*x + 6   y = 21*x + 34   order: 33 | 4
483: x = 11*x + 6   y = 22*x + 9 | 4
484: x = 11*x + 7   y = 11*x + 26   order: 165 | 4
485: x = 11*x + 7   y = 32*x + 17 | 4
486: x = 11*x + 9   y = 12*x + 26   order: 165 | 4
487: x = 11*x + 9   y = 31*x + 17 | 4

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488: x = 11*x + 11  y = 11*x + 25  order: 55 | 4
489: x = 11*x + 11  y = 32*x + 18 | 4
490: x = 11*x + 12  y = 16*x + 19  order: 165 | 4
491: x = 11*x + 12  y = 27*x + 24 | 4
492: x = 11*x + 13  y = 14*x + 33  order: 33 | 4
493: x = 11*x + 13  y = 29*x + 10 | 4
494: x = 11*x + 14  y = 3*x + 3  order: 165 | 4
495: x = 11*x + 14  y = 40*x + 40 | 4
496: x = 11*x + 18  y = 13*x + 1  order: 165 | 4
497: x = 11*x + 18  y = 30*x + 42 | 4
498: x = 11*x + 23  y = 4*x + 17  order: 165 | 4
499: x = 11*x + 23  y = 39*x + 26 | 4
500: x = 11*x + 24  y = 8*x + 32  order: 165 | 4
501: x = 11*x + 24  y = 35*x + 11 | 4
502: x = 11*x + 25  y = 11*x + 34  order: 55 | 4
503: x = 11*x + 25  y = 32*x + 9 | 4
504: x = 11*x + 30  y = 13*x + 32  order: 165 | 4
505: x = 11*x + 30  y = 30*x + 11 | 4
506: x = 11*x + 32  y = 11*x + 1  order: 165 | 4
507: x = 11*x + 32  y = 32*x + 42 | 4
508: x = 11*x + 33  y = 18*x + 2  order: 55 | 4
509: x = 11*x + 33  y = 25*x + 41 | 4
510: x = 11*x + 36  y = 16*x + 21  order: 165 | 4
511: x = 11*x + 36  y = 27*x + 22 | 4
512: x = 11*x + 38  y = 7*x + 20  order: 165 | 4
513: x = 11*x + 38  y = 36*x + 23 | 4
514: x = 11*x + 39  y = 16*x + 4  order: 33 | 4
515: x = 11*x + 39  y = 27*x + 39 | 4
516: x = 11*x + 40  y = 3*x + 3  order: 55 | 4
517: x = 11*x + 40  y = 40*x + 40 | 4
518: x = 11*x + 42  y = 7*x + 1  order: 165 | 4
519: x = 11*x + 42  y = 36*x + 42 | 4
520: x = 12*x + 2  y = 5*x + 21  order: 33 | 4
521: x = 12*x + 2  y = 38*x + 22 | 4
522: x = 12*x + 5  y = 14*x + 2  order: 165 | 4
523: x = 12*x + 5  y = 29*x + 41 | 4
524: x = 12*x + 9  y = 13*x + 37  order: 33 | 4
525: x = 12*x + 9  y = 30*x + 6 | 4
526: x = 12*x + 10  y = 6*x + 22  order: 33 | 4
527: x = 12*x + 10  y = 37*x + 21 | 4
528: x = 12*x + 13  y = 8*x + 28  order: 165 | 4
529: x = 12*x + 13  y = 35*x + 15 | 4
530: x = 12*x + 15  y = 10*x + 13  order: 33 | 4
531: x = 12*x + 15  y = 33*x + 30 | 4
532: x = 12*x + 16  y = 20*x + 1  order: 165 | 4
533: x = 12*x + 16  y = 23*x + 42 | 4
534: x = 12*x + 17  y = 1*x + 5  order: 165 | 4
535: x = 12*x + 17  y = 42*x + 38 | 4
536: x = 12*x + 20  y = 8  order: 165 | 2
537: x = 12*x + 20  y = 35 | 2

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538: x = 12*x + 22  y = 8*x + 10  order: 165 | 4
539: x = 12*x + 22  y = 35*x + 33 | 4
540: x = 12*x + 23  y = 7*x + 0   order: 55 | 4
541: x = 12*x + 23  y = 36*x + 0 | 4
542: x = 12*x + 24  y = 13*x + 20 order: 33 | 4
543: x = 12*x + 24  y = 30*x + 23 | 4
544: x = 12*x + 29  y = 17*x + 31 order: 55 | 4
545: x = 12*x + 29  y = 26*x + 12 | 4
546: x = 12*x + 32  y = 4*x + 12  order: 165 | 4
547: x = 12*x + 32  y = 39*x + 31 | 4
548: x = 12*x + 35  y = 14*x + 7   order: 165 | 4
549: x = 12*x + 35  y = 29*x + 36 | 4
550: x = 12*x + 37  y = 17*x + 23 order: 165 | 4
551: x = 12*x + 37  y = 26*x + 20 | 4
552: x = 12*x + 38  y = 11*x + 2   order: 55 | 4
553: x = 12*x + 38  y = 32*x + 41 | 4
554: x = 12*x + 42  y = 19*x + 23 order: 165 | 4
555: x = 12*x + 42  y = 24*x + 20 | 4
556: x = 13*x + 0   y = 21*x + 42 order: 55 | 4
557: x = 13*x + 0   y = 22*x + 1 | 4
558: x = 13*x + 1   y = 15*x + 36 order: 55 | 4
559: x = 13*x + 1   y = 28*x + 7 | 4
560: x = 13*x + 2   y = 18*x + 4   order: 33 | 4
561: x = 13*x + 2   y = 25*x + 39 | 4
562: x = 13*x + 3   y = 11*x + 32 order: 11 | 4
563: x = 13*x + 3   y = 32*x + 11 | 4
564: x = 13*x + 4   y = 11*x + 37 order: 165 | 4
565: x = 13*x + 4   y = 32*x + 6 | 4
566: x = 13*x + 7   y = 6*x + 9   order: 33 | 4
567: x = 13*x + 7   y = 37*x + 34 | 4
568: x = 13*x + 8   y = 16*x + 10 order: 165 | 4
569: x = 13*x + 8   y = 27*x + 33 | 4
570: x = 13*x + 9   y = 8*x + 7   order: 55 | 4
571: x = 13*x + 9   y = 35*x + 36 | 4
572: x = 13*x + 13  y = 13*x + 21 order: 165 | 4
573: x = 13*x + 13  y = 30*x + 22 | 4
574: x = 13*x + 17  y = 10*x + 21 order: 11 | 4
575: x = 13*x + 17  y = 33*x + 22 | 4
576: x = 13*x + 18  y = 1*x + 9   order: 165 | 4
577: x = 13*x + 18  y = 42*x + 34 | 4
578: x = 13*x + 19  y = 14*x + 18 order: 165 | 4
579: x = 13*x + 19  y = 29*x + 25 | 4
580: x = 13*x + 21  y = 10*x + 1   order: 165 | 4
581: x = 13*x + 21  y = 33*x + 42 | 4
582: x = 13*x + 22  y = 8*x + 13  order: 165 | 4
583: x = 13*x + 22  y = 35*x + 30 | 4
584: x = 13*x + 24  y = 11*x + 2   order: 11 | 4
585: x = 13*x + 24  y = 32*x + 41 | 4
586: x = 13*x + 28  y = 21*x + 2   order: 33 | 4
587: x = 13*x + 28  y = 22*x + 41 | 4

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588: x = 13*x + 32  y = 1*x + 5  order: 165 | 4
589: x = 13*x + 32  y = 42*x + 38 | 4
590: x = 13*x + 35  y = 10*x + 1  order: 165 | 4
591: x = 13*x + 35  y = 33*x + 42 | 4
592: x = 13*x + 36  y = 11*x + 5  order: 15 | 4
593: x = 13*x + 36  y = 32*x + 38 | 4
594: x = 13*x + 38  y = 14*x + 3  order: 165 | 4
595: x = 13*x + 38  y = 29*x + 40 | 4
596: x = 13*x + 39  y = 15*x + 11 order: 55 | 4
597: x = 13*x + 39  y = 28*x + 32 | 4
598: x = 13*x + 40  y = 7*x + 29  order: 165 | 4
599: x = 13*x + 40  y = 36*x + 14 | 4
600: x = 13*x + 42  y = 7*x + 8   order: 165 | 4
601: x = 13*x + 42  y = 36*x + 35 | 4
602: x = 14*x + 0   y = 8*x + 9   order: 165 | 4
603: x = 14*x + 0   y = 35*x + 34 | 4
604: x = 14*x + 1   y = 7*x + 4   order: 165 | 4
605: x = 14*x + 1   y = 36*x + 39 | 4
606: x = 14*x + 2   y = 14*x + 23 order: 11 | 4
607: x = 14*x + 2   y = 29*x + 20 | 4
608: x = 14*x + 4   y = 19*x + 7   order: 33 | 4
609: x = 14*x + 4   y = 24*x + 36 | 4
610: x = 14*x + 5   y = 12*x + 13 order: 55 | 4
611: x = 14*x + 5   y = 31*x + 30 | 4
612: x = 14*x + 6   y = 13*x + 23 order: 165 | 4
613: x = 14*x + 6   y = 30*x + 20 | 4
614: x = 14*x + 7   y = 4*x + 2   order: 55 | 4
615: x = 14*x + 7   y = 39*x + 41 | 4
616: x = 14*x + 8   y = 4*x + 18  order: 165 | 4
617: x = 14*x + 8   y = 39*x + 25 | 4
618: x = 14*x + 12  y = 18*x + 31 order: 11 | 4
619: x = 14*x + 12  y = 25*x + 12 | 4
620: x = 14*x + 17  y = 6*x + 9   order: 33 | 4
621: x = 14*x + 17  y = 37*x + 34 | 4
622: x = 14*x + 18  y = 8*x + 26  order: 165 | 4
623: x = 14*x + 18  y = 35*x + 17 | 4
624: x = 14*x + 21  y = 12*x + 5   order: 55 | 4
625: x = 14*x + 21  y = 31*x + 38 | 4
626: x = 14*x + 22  y = 15*x + 0   order: 55 | 4
627: x = 14*x + 22  y = 28*x + 0   | 4
628: x = 14*x + 23  y = 16*x + 0   order: 55 | 4
629: x = 14*x + 23  y = 27*x + 0   | 4
630: x = 14*x + 24  y = 12*x + 28 order: 55 | 4
631: x = 14*x + 24  y = 31*x + 15 | 4
632: x = 14*x + 25  y = 21*x + 12 order: 165 | 4
633: x = 14*x + 25  y = 22*x + 31 | 4
634: x = 14*x + 26  y = 16*x + 33 order: 33 | 4
635: x = 14*x + 26  y = 27*x + 10 | 4
636: x = 14*x + 32  y = 9*x + 8   order: 55 | 4
637: x = 14*x + 32  y = 34*x + 35 | 4

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638: x = 14*x + 33  y = 11*x + 8  order: 165 | 4
639: x = 14*x + 33  y = 32*x + 35 | 4
640: x = 14*x + 34  y = 6*x + 39  order: 165 | 4
641: x = 14*x + 34  y = 37*x + 4  | 4
642: x = 14*x + 37  y = 15*x + 42  order: 33 | 4
643: x = 14*x + 37  y = 28*x + 1  | 4
644: x = 14*x + 38  y = 12*x + 0  order: 11 | 4
645: x = 14*x + 38  y = 31*x + 0  | 4
646: x = 14*x + 41  y = 17*x + 39  order: 165 | 4
647: x = 14*x + 41  y = 26*x + 4  | 4
648: x = 15*x + 2   y = 12*x + 29  order: 55 | 4
649: x = 15*x + 2   y = 31*x + 14  | 4
650: x = 15*x + 3   y = 15*x + 41  order: 165 | 4
651: x = 15*x + 3   y = 28*x + 2  | 4
652: x = 15*x + 4   y = 6*x + 3   order: 165 | 4
653: x = 15*x + 4   y = 37*x + 40 | 4
654: x = 15*x + 5   y = 17*x + 17  order: 165 | 4
655: x = 15*x + 5   y = 26*x + 26 | 4
656: x = 15*x + 6   y = 21*x + 9   order: 165 | 4
657: x = 15*x + 6   y = 22*x + 34 | 4
658: x = 15*x + 7   y = 6*x + 1   order: 55 | 4
659: x = 15*x + 7   y = 37*x + 42 | 4
660: x = 15*x + 9   y = 9*x + 1   order: 55 | 4
661: x = 15*x + 9   y = 34*x + 42 | 4
662: x = 15*x + 10  y = 7*x + 18  order: 33 | 4
663: x = 15*x + 10  y = 36*x + 25 | 4
664: x = 15*x + 11  y = 21  order: 165 | 2
665: x = 15*x + 11  y = 22  | 2
666: x = 15*x + 13  y = 16*x + 36  order: 55 | 4
667: x = 15*x + 13  y = 27*x + 7  | 4
668: x = 15*x + 15  y = 10*x + 18  order: 165 | 4
669: x = 15*x + 15  y = 33*x + 25 | 4
670: x = 15*x + 16  y = 12*x + 11  order: 55 | 4
671: x = 15*x + 16  y = 31*x + 32 | 4
672: x = 15*x + 17  y = 3*x + 6   order: 165 | 4
673: x = 15*x + 17  y = 40*x + 37 | 4
674: x = 15*x + 20  y = 21*x + 2   order: 55 | 4
675: x = 15*x + 20  y = 22*x + 41 | 4
676: x = 15*x + 25  y = 3*x + 35  order: 165 | 4
677: x = 15*x + 25  y = 40*x + 8  | 4
678: x = 15*x + 26  y = 20*x + 5   order: 33 | 4
679: x = 15*x + 26  y = 23*x + 38 | 4
680: x = 15*x + 28  y = 10*x + 20  order: 55 | 4
681: x = 15*x + 28  y = 33*x + 23 | 4
682: x = 15*x + 29  y = 16*x + 20  order: 165 | 4
683: x = 15*x + 29  y = 27*x + 23 | 4
684: x = 15*x + 30  y = 18*x + 3   order: 55 | 4
685: x = 15*x + 30  y = 25*x + 40 | 4
686: x = 15*x + 32  y = 5*x + 4   order: 165 | 4
687: x = 15*x + 32  y = 38*x + 39 | 4

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688: x = 15*x + 34  y = 7*x + 13  order: 33 | 4
689: x = 15*x + 34  y = 36*x + 30 | 4
690: x = 15*x + 36  y = 16*x + 15  order: 33 | 4
691: x = 15*x + 36  y = 27*x + 28 | 4
692: x = 15*x + 38  y = 21*x + 2  order: 165 | 4
693: x = 15*x + 38  y = 22*x + 41 | 4
694: x = 15*x + 40  y = 8*x + 27  order: 165 | 4
695: x = 15*x + 40  y = 35*x + 16 | 4
696: x = 16*x + 2   y = 10*x + 11  order: 165 | 4
697: x = 16*x + 2   y = 33*x + 32 | 4
698: x = 16*x + 8   y = 2*x + 29  order: 165 | 4
699: x = 16*x + 8   y = 41*x + 14 | 4
700: x = 16*x + 10  y = 7*x + 16  order: 165 | 4
701: x = 16*x + 10  y = 36*x + 27 | 4
702: x = 16*x + 15  y = 15*x + 28  order: 33 | 4
703: x = 16*x + 15  y = 28*x + 15 | 4
704: x = 16*x + 16  y = 3*x + 9   order: 165 | 4
705: x = 16*x + 16  y = 40*x + 34 | 4
706: x = 16*x + 18  y = 15*x + 15  order: 55 | 4
707: x = 16*x + 18  y = 28*x + 28 | 4
708: x = 16*x + 19  y = 6*x + 9   order: 33 | 4
709: x = 16*x + 19  y = 37*x + 34 | 4
710: x = 16*x + 23  y = 8*x + 41  order: 11 | 4
711: x = 16*x + 23  y = 35*x + 2   | 4
712: x = 16*x + 24  y = 8*x + 5   order: 165 | 4
713: x = 16*x + 24  y = 35*x + 38 | 4
714: x = 16*x + 30  y = 4*x + 39  order: 55 | 4
715: x = 16*x + 30  y = 39*x + 4   | 4
716: x = 16*x + 35  y = 12*x + 21  order: 33 | 4
717: x = 16*x + 35  y = 31*x + 22 | 4
718: x = 16*x + 38  y = 7*x + 35  order: 165 | 4
719: x = 16*x + 38  y = 36*x + 8   | 4
720: x = 17*x + 0   y = 10*x + 17  order: 165 | 4
721: x = 17*x + 0   y = 33*x + 26 | 4
722: x = 17*x + 1   y = 19*x + 0   order: 55 | 4
723: x = 17*x + 1   y = 24*x + 0   | 4
724: x = 17*x + 2   y = 1   order: 55 | 2
725: x = 17*x + 2   y = 42 | 2
726: x = 17*x + 3   y = 3*x + 7   order: 165 | 4
727: x = 17*x + 3   y = 40*x + 36 | 4
728: x = 17*x + 4   y = 7*x + 37  order: 11 | 4
729: x = 17*x + 4   y = 36*x + 6   | 4
730: x = 17*x + 8   y = 6*x + 18  order: 55 | 4
731: x = 17*x + 8   y = 37*x + 25 | 4
732: x = 17*x + 10  y = 4*x + 5   order: 165 | 4
733: x = 17*x + 10  y = 39*x + 38 | 4
734: x = 17*x + 11  y = 14*x + 9   order: 55 | 4
735: x = 17*x + 11  y = 29*x + 34 | 4
736: x = 17*x + 14  y = 4*x + 33  order: 165 | 4
737: x = 17*x + 14  y = 39*x + 10 | 4

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738: x = 17*x + 15  y = 13  order: 33 | 2
739: x = 17*x + 15  y = 30 | 2
740: x = 17*x + 17  y = 6*x + 23  order: 55 | 4
741: x = 17*x + 17  y = 37*x + 20 | 4
742: x = 17*x + 18  y = 12*x + 22  order: 165 | 4
743: x = 17*x + 18  y = 31*x + 21 | 4
744: x = 17*x + 20  y = 4*x + 6  order: 165 | 4
745: x = 17*x + 20  y = 39*x + 37 | 4
746: x = 17*x + 22  y = 5*x + 7  order: 55 | 4
747: x = 17*x + 22  y = 38*x + 36 | 4
748: x = 17*x + 23  y = 1*x + 6  order: 55 | 4
749: x = 17*x + 23  y = 42*x + 37 | 4
750: x = 17*x + 24  y = 13*x + 36  order: 55 | 4
751: x = 17*x + 24  y = 30*x + 7 | 4
752: x = 17*x + 27  y = 2*x + 42  order: 55 | 4
753: x = 17*x + 27  y = 41*x + 1 | 4
754: x = 17*x + 28  y = 8*x + 1  order: 55 | 4
755: x = 17*x + 28  y = 35*x + 42 | 4
756: x = 17*x + 30  y = 10*x + 1  order: 165 | 4
757: x = 17*x + 30  y = 33*x + 42 | 4
758: x = 17*x + 32  y = 11*x + 17  order: 11 | 4
759: x = 17*x + 32  y = 32*x + 26 | 4
760: x = 17*x + 34  y = 4*x + 8  order: 55 | 4
761: x = 17*x + 34  y = 39*x + 35 | 4
762: x = 17*x + 35  y = 7*x + 9  order: 11 | 4
763: x = 17*x + 35  y = 36*x + 34 | 4
764: x = 17*x + 39  y = 8*x + 18  order: 165 | 4
765: x = 17*x + 39  y = 35*x + 25 | 4
766: x = 17*x + 40  y = 17*x + 36  order: 33 | 4
767: x = 17*x + 40  y = 26*x + 7 | 4
768: x = 17*x + 42  y = 9*x + 33  order: 165 | 4
769: x = 17*x + 42  y = 34*x + 10 | 4
770: x = 18*x + 0  y = 1*x + 30  order: 165 | 4
771: x = 18*x + 0  y = 42*x + 13 | 4
772: x = 18*x + 2  y = 9*x + 36  order: 33 | 4
773: x = 18*x + 2  y = 34*x + 7 | 4
774: x = 18*x + 4  y = 1*x + 23  order: 33 | 4
775: x = 18*x + 4  y = 42*x + 20 | 4
776: x = 18*x + 5  y = 8*x + 6  order: 165 | 4
777: x = 18*x + 5  y = 35*x + 37 | 4
778: x = 18*x + 6  y = 3*x + 37  order: 165 | 4
779: x = 18*x + 6  y = 40*x + 6 | 4
780: x = 18*x + 8  y = 16*x + 24  order: 165 | 4
781: x = 18*x + 8  y = 27*x + 19 | 4
782: x = 18*x + 13  y = 20*x + 28  order: 165 | 4
783: x = 18*x + 13  y = 23*x + 15 | 4
784: x = 18*x + 16  y = 1*x + 26  order: 55 | 4
785: x = 18*x + 16  y = 42*x + 17 | 4
786: x = 18*x + 18  y = 13*x + 22  order: 165 | 4
787: x = 18*x + 18  y = 30*x + 21 | 4

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788: x = 18*x + 19  y = 9*x + 17  order: 165 | 4
789: x = 18*x + 19  y = 34*x + 26 | 4
790: x = 18*x + 20  y = 17*x + 8   order: 165 | 4
791: x = 18*x + 20  y = 26*x + 35 | 4
792: x = 18*x + 22  y = 5*x + 2   order: 55 | 4
793: x = 18*x + 22  y = 38*x + 41 | 4
794: x = 18*x + 23  y = 5*x + 36  order: 33 | 4
795: x = 18*x + 23  y = 38*x + 7  | 4
796: x = 18*x + 24  y = 11*x + 2   order: 55 | 4
797: x = 18*x + 24  y = 32*x + 41 | 4
798: x = 18*x + 28  y = 14   order: 165 | 2
799: x = 18*x + 28  y = 29 | 2
800: x = 18*x + 30  y = 18*x + 0   order: 55 | 4
801: x = 18*x + 30  y = 25*x + 0 | 4
802: x = 18*x + 33  y = 19   order: 55 | 2
803: x = 18*x + 33  y = 24 | 2
804: x = 18*x + 34  y = 6*x + 30  order: 55 | 4
805: x = 18*x + 34  y = 37*x + 13 | 4
806: x = 18*x + 37  y = 1*x + 5   order: 55 | 4
807: x = 18*x + 37  y = 42*x + 38 | 4
808: x = 18*x + 38  y = 14*x + 42  order: 165 | 4
809: x = 18*x + 38  y = 29*x + 1 | 4
810: x = 18*x + 42  y = 18*x + 26  order: 165 | 4
811: x = 18*x + 42  y = 25*x + 17 | 4
812: x = 19*x + 4   y = 7*x + 33  order: 33 | 4
813: x = 19*x + 4   y = 36*x + 10 | 4
814: x = 19*x + 5   y = 12*x + 12  order: 165 | 4
815: x = 19*x + 5   y = 31*x + 31 | 4
816: x = 19*x + 7   y = 21*x + 41  order: 55 | 4
817: x = 19*x + 7   y = 22*x + 2  | 4
818: x = 19*x + 8   y = 18*x + 6   order: 55 | 4
819: x = 19*x + 8   y = 25*x + 37 | 4
820: x = 19*x + 9   y = 8*x + 17  order: 33 | 4
821: x = 19*x + 9   y = 35*x + 26 | 4
822: x = 19*x + 11  y = 4*x + 10  order: 11 | 4
823: x = 19*x + 11  y = 39*x + 33 | 4
824: x = 19*x + 12  y = 6*x + 13  order: 11 | 4
825: x = 19*x + 12  y = 37*x + 30 | 4
826: x = 19*x + 19  y = 20*x + 8   order: 55 | 4
827: x = 19*x + 19  y = 23*x + 35 | 4
828: x = 19*x + 21  y = 10*x + 39  order: 165 | 4
829: x = 19*x + 21  y = 33*x + 4  | 4
830: x = 19*x + 25  y = 3*x + 30  order: 165 | 4
831: x = 19*x + 25  y = 40*x + 13 | 4
832: x = 19*x + 26  y = 15*x + 31  order: 11 | 4
833: x = 19*x + 26  y = 28*x + 12 | 4
834: x = 19*x + 27  y = 14*x + 20  order: 165 | 4
835: x = 19*x + 27  y = 29*x + 23 | 4
836: x = 19*x + 30  y = 7*x + 36  order: 165 | 4
837: x = 19*x + 30  y = 36*x + 7  | 4

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838: x = 19*x + 33  y = 8*x + 27  order: 165 | 4
839: x = 19*x + 33  y = 35*x + 16 | 4
840: x = 19*x + 36  y = 3*x + 33  order: 55 | 4
841: x = 19*x + 36  y = 40*x + 10 | 4
842: x = 19*x + 39  y = 15*x + 32  order: 55 | 4
843: x = 19*x + 39  y = 28*x + 11 | 4
844: x = 19*x + 40  y = 10*x + 30  order: 55 | 4
845: x = 19*x + 40  y = 33*x + 13 | 4
846: x = 19*x + 41  y = 11*x + 11  order: 55 | 4
847: x = 19*x + 41  y = 32*x + 32 | 4
848: x = 20*x + 0   y = 10*x + 2   order: 165 | 4
849: x = 20*x + 0   y = 33*x + 41 | 4
850: x = 20*x + 1   y = 3*x + 38  order: 165 | 4
851: x = 20*x + 1   y = 40*x + 5  | 4
852: x = 20*x + 3   y = 5*x + 13  order: 165 | 4
853: x = 20*x + 3   y = 38*x + 30 | 4
854: x = 20*x + 5   y = 16*x + 16  order: 165 | 4
855: x = 20*x + 5   y = 27*x + 27 | 4
856: x = 20*x + 7   y = 17*x + 27  order: 165 | 4
857: x = 20*x + 7   y = 26*x + 16 | 4
858: x = 20*x + 8   y = 7*x + 27  order: 165 | 4
859: x = 20*x + 8   y = 36*x + 16 | 4
860: x = 20*x + 9   y = 18*x + 0   order: 165 | 4
861: x = 20*x + 9   y = 25*x + 0   | 4
862: x = 20*x + 10  y = 16*x + 39  order: 165 | 4
863: x = 20*x + 10  y = 27*x + 4   | 4
864: x = 20*x + 12  y = 1*x + 36  order: 165 | 4
865: x = 20*x + 12  y = 42*x + 7   | 4
866: x = 20*x + 13  y = 17*x + 27  order: 11 | 4
867: x = 20*x + 13  y = 26*x + 16 | 4
868: x = 20*x + 15  y = 6*x + 10  order: 165 | 4
869: x = 20*x + 15  y = 37*x + 33 | 4
870: x = 20*x + 16  y = 20*x + 20  order: 165 | 4
871: x = 20*x + 16  y = 23*x + 23 | 4
872: x = 20*x + 17  y = 17*x + 4   order: 165 | 4
873: x = 20*x + 17  y = 26*x + 39 | 4
874: x = 20*x + 18  y = 15*x + 41  order: 55 | 4
875: x = 20*x + 18  y = 28*x + 2   | 4
876: x = 20*x + 22  y = 5*x + 24  order: 33 | 4
877: x = 20*x + 22  y = 38*x + 19 | 4
878: x = 20*x + 23  y = 7*x + 40  order: 165 | 4
879: x = 20*x + 23  y = 36*x + 3   | 4
880: x = 20*x + 25  y = 7*x + 22  order: 11 | 4
881: x = 20*x + 25  y = 36*x + 21 | 4
882: x = 20*x + 27  y = 15*x + 18  order: 165 | 4
883: x = 20*x + 27  y = 28*x + 25 | 4
884: x = 20*x + 28  y = 8*x + 34  order: 165 | 4
885: x = 20*x + 28  y = 35*x + 9   | 4
886: x = 20*x + 31  y = 10*x + 36  order: 165 | 4
887: x = 20*x + 31  y = 33*x + 7   | 4

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888: x = 20*x + 32  y = 6*x + 26  order: 165 | 4
889: x = 20*x + 32  y = 37*x + 17 | 4
890: x = 20*x + 34  y = 10*x + 11  order: 55 | 4
891: x = 20*x + 34  y = 33*x + 32 | 4
892: x = 20*x + 36  y = 2*x + 26  order: 165 | 4
893: x = 20*x + 36  y = 41*x + 17 | 4
894: x = 20*x + 39  y = 11*x + 32  order: 165 | 4
895: x = 20*x + 39  y = 32*x + 11 | 4
896: x = 20*x + 41  y = 20  order: 33 | 2
897: x = 20*x + 41  y = 23 | 2
898: x = 20*x + 42  y = 10*x + 22  order: 165 | 4
899: x = 20*x + 42  y = 33*x + 21 | 4
900: x = 21*x + 2  y = 2*x + 42  order: 165 | 4
901: x = 21*x + 2  y = 41*x + 1 | 4
902: x = 21*x + 4  y = 15*x + 3  order: 165 | 4
903: x = 21*x + 4  y = 28*x + 40 | 4
904: x = 21*x + 5  y = 1*x + 28  order: 55 | 4
905: x = 21*x + 5  y = 42*x + 15 | 4
906: x = 21*x + 6  y = 7*x + 30  order: 55 | 4
907: x = 21*x + 6  y = 36*x + 13 | 4
908: x = 21*x + 7  y = 13*x + 8  order: 55 | 4
909: x = 21*x + 7  y = 30*x + 35 | 4
910: x = 21*x + 11 y = 9*x + 22  order: 165 | 4
911: x = 21*x + 11 y = 34*x + 21 | 4
912: x = 21*x + 12 y = 7*x + 35  order: 165 | 4
913: x = 21*x + 12 y = 36*x + 8 | 4
914: x = 21*x + 13 y = 17*x + 39  order: 165 | 4
915: x = 21*x + 13 y = 26*x + 4 | 4
916: x = 21*x + 17 y = 13*x + 41  order: 165 | 4
917: x = 21*x + 17 y = 30*x + 2 | 4
918: x = 21*x + 18 y = 19*x + 2  order: 55 | 4
919: x = 21*x + 18 y = 24*x + 41 | 4
920: x = 21*x + 20 y = 15*x + 35  order: 165 | 4
921: x = 21*x + 20 y = 28*x + 8 | 4
922: x = 21*x + 22 y = 19*x + 42  order: 55 | 4
923: x = 21*x + 22 y = 24*x + 1 | 4
924: x = 21*x + 24 y = 12*x + 40  order: 55 | 4
925: x = 21*x + 24 y = 31*x + 3 | 4
926: x = 21*x + 25 y = 18*x + 9  order: 165 | 4
927: x = 21*x + 25 y = 25*x + 34 | 4
928: x = 21*x + 27 y = 4*x + 28  order: 165 | 4
929: x = 21*x + 27 y = 39*x + 15 | 4
930: x = 21*x + 28 y = 8*x + 38  order: 165 | 4
931: x = 21*x + 28 y = 35*x + 5 | 4
932: x = 21*x + 30 y = 20*x + 9  order: 165 | 4
933: x = 21*x + 30 y = 23*x + 34 | 4
934: x = 21*x + 31 y = 2*x + 19  order: 55 | 4
935: x = 21*x + 31 y = 41*x + 24 | 4
936: x = 21*x + 32 y = 3*x + 3  order: 165 | 4
937: x = 21*x + 32 y = 40*x + 40 | 4

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938: x = 21*x + 33  y = 15*x + 40  order: 165 | 4
939: x = 21*x + 33  y = 28*x + 3  | 4
940: x = 21*x + 34  y = 6*x + 14  order: 11 | 4
941: x = 21*x + 34  y = 37*x + 29 | 4
942: x = 21*x + 38  y = 19*x + 40  order: 165 | 4
943: x = 21*x + 38  y = 24*x + 3  | 4
944: x = 21*x + 39  y = 3*x + 23  order: 55 | 4
945: x = 21*x + 39  y = 40*x + 20 | 4
946: x = 21*x + 41  y = 15*x + 36  order: 165 | 4
947: x = 21*x + 41  y = 28*x + 7  | 4
948: x = 21*x + 42  y = 19*x + 42  order: 165 | 4
949: x = 21*x + 42  y = 24*x + 1  | 4
950: x = 22*x + 1   y = 19*x + 20  order: 55 | 4
951: x = 22*x + 1   y = 24*x + 23 | 4
952: x = 22*x + 3   y = 12*x + 15  order: 55 | 4
953: x = 22*x + 3   y = 31*x + 28 | 4
954: x = 22*x + 4   y = 18*x + 9   order: 165 | 4
955: x = 22*x + 4   y = 25*x + 34 | 4
956: x = 22*x + 6   y = 4*x + 19   order: 165 | 4
957: x = 22*x + 6   y = 39*x + 24 | 4
958: x = 22*x + 7   y = 8*x + 13   order: 165 | 4
959: x = 22*x + 7   y = 35*x + 30 | 4
960: x = 22*x + 9   y = 20*x + 11  order: 165 | 4
961: x = 22*x + 9   y = 23*x + 32 | 4
962: x = 22*x + 10  y = 2*x + 26  order: 55 | 4
963: x = 22*x + 10  y = 41*x + 17 | 4
964: x = 22*x + 11  y = 3*x + 0   order: 165 | 4
965: x = 22*x + 11  y = 40*x + 0  | 4
966: x = 22*x + 12  y = 15*x + 18  order: 165 | 4
967: x = 22*x + 12  y = 28*x + 25 | 4
968: x = 22*x + 13  y = 6*x + 35  order: 11 | 4
969: x = 22*x + 13  y = 37*x + 8  | 4
970: x = 22*x + 17  y = 19*x + 22  order: 165 | 4
971: x = 22*x + 17  y = 24*x + 21 | 4
972: x = 22*x + 18  y = 3*x + 23  order: 55 | 4
973: x = 22*x + 18  y = 40*x + 20 | 4
974: x = 22*x + 20  y = 15*x + 22  order: 165 | 4
975: x = 22*x + 20  y = 28*x + 21 | 4
976: x = 22*x + 21  y = 19*x + 20  order: 165 | 4
977: x = 22*x + 21  y = 24*x + 23 | 4
978: x = 22*x + 24  y = 2*x + 3   order: 165 | 4
979: x = 22*x + 24  y = 41*x + 40 | 4
980: x = 22*x + 26  y = 15*x + 12  order: 165 | 4
981: x = 22*x + 26  y = 28*x + 31 | 4
982: x = 22*x + 27  y = 1*x + 16  order: 55 | 4
983: x = 22*x + 27  y = 42*x + 27 | 4
984: x = 22*x + 28  y = 7*x + 20  order: 55 | 4
985: x = 22*x + 28  y = 36*x + 23 | 4
986: x = 22*x + 29  y = 13*x + 5   order: 55 | 4
987: x = 22*x + 29  y = 30*x + 38 | 4

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988: x = 22*x + 33  y = 9*x + 30  order: 165 | 4
989: x = 22*x + 33  y = 34*x + 13 | 4
990: x = 22*x + 34  y = 7*x + 15  order: 165 | 4
991: x = 22*x + 34  y = 36*x + 28 | 4
992: x = 22*x + 35  y = 17*x + 21  order: 165 | 4
993: x = 22*x + 35  y = 26*x + 22 | 4
994: x = 22*x + 39  y = 13*x + 15  order: 165 | 4
995: x = 22*x + 39  y = 30*x + 28 | 4
996: x = 22*x + 40  y = 19*x + 17  order: 55 | 4
997: x = 22*x + 40  y = 24*x + 26 | 4
998: x = 22*x + 42  y = 15*x + 23  order: 165 | 4
999: x = 22*x + 42  y = 28*x + 20 | 4
1000: x = 23*x + 2  y = 5*x + 24  order: 33 | 4
1001: x = 23*x + 2  y = 38*x + 19 | 4
1002: x = 23*x + 3  y = 7*x + 10  order: 165 | 4
1003: x = 23*x + 3  y = 36*x + 33 | 4
1004: x = 23*x + 5  y = 7*x + 28  order: 11 | 4
1005: x = 23*x + 5  y = 36*x + 15 | 4
1006: x = 23*x + 7  y = 15*x + 40  order: 165 | 4
1007: x = 23*x + 7  y = 28*x + 3 | 4
1008: x = 23*x + 8  y = 8*x + 17  order: 165 | 4
1009: x = 23*x + 8  y = 35*x + 26 | 4
1010: x = 23*x + 11 y = 10*x + 17  order: 165 | 4
1011: x = 23*x + 11 y = 33*x + 26 | 4
1012: x = 23*x + 12 y = 6*x + 23  order: 165 | 4
1013: x = 23*x + 12 y = 37*x + 20 | 4
1014: x = 23*x + 14 y = 10*x + 42  order: 55 | 4
1015: x = 23*x + 14 y = 33*x + 1 | 4
1016: x = 23*x + 16 y = 2*x + 19  order: 165 | 4
1017: x = 23*x + 16 y = 41*x + 24 | 4
1018: x = 23*x + 19 y = 11*x + 22  order: 165 | 4
1019: x = 23*x + 19 y = 32*x + 21 | 4
1020: x = 23*x + 21 y = 20  order: 33 | 2
1021: x = 23*x + 21 y = 23 | 2
1022: x = 23*x + 22 y = 10*x + 31  order: 165 | 4
1023: x = 23*x + 22 y = 33*x + 12 | 4
1024: x = 23*x + 23 y = 10*x + 8  order: 165 | 4
1025: x = 23*x + 23 y = 33*x + 35 | 4
1026: x = 23*x + 24 y = 3*x + 8  order: 165 | 4
1027: x = 23*x + 24 y = 40*x + 35 | 4
1028: x = 23*x + 26 y = 5*x + 35  order: 165 | 4
1029: x = 23*x + 26 y = 38*x + 8 | 4
1030: x = 23*x + 28 y = 16*x + 0  order: 165 | 4
1031: x = 23*x + 28 y = 27*x + 0 | 4
1032: x = 23*x + 30 y = 17*x + 33  order: 165 | 4
1033: x = 23*x + 30 y = 26*x + 10 | 4
1034: x = 23*x + 31 y = 7*x + 23  order: 165 | 4
1035: x = 23*x + 31 y = 36*x + 20 | 4
1036: x = 23*x + 32 y = 18*x + 18  order: 165 | 4
1037: x = 23*x + 32 y = 25*x + 25 | 4

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1038: x = 23*x + 33  y = 16*x + 20  order: 165 | 4
1039: x = 23*x + 33  y = 27*x + 23 | 4
1040: x = 23*x + 35  y = 1*x + 8   order: 165 | 4
1041: x = 23*x + 35  y = 42*x + 35 | 4
1042: x = 23*x + 36  y = 17*x + 33  order: 11 | 4
1043: x = 23*x + 36  y = 26*x + 10 | 4
1044: x = 23*x + 38  y = 6*x + 39   order: 165 | 4
1045: x = 23*x + 38  y = 37*x + 4  | 4
1046: x = 23*x + 39  y = 20*x + 0   order: 165 | 4
1047: x = 23*x + 39  y = 23*x + 0  | 4
1048: x = 23*x + 40  y = 17*x + 13  order: 165 | 4
1049: x = 23*x + 40  y = 26*x + 30 | 4
1050: x = 23*x + 41  y = 15*x + 17  order: 55 | 4
1051: x = 23*x + 41  y = 28*x + 26 | 4
1052: x = 24*x + 0   y = 20*x + 12  order: 55 | 4
1053: x = 24*x + 0   y = 23*x + 31 | 4
1054: x = 24*x + 2   y = 10*x + 14  order: 165 | 4
1055: x = 24*x + 2   y = 33*x + 29 | 4
1056: x = 24*x + 6   y = 3*x + 16   order: 165 | 4
1057: x = 24*x + 6   y = 40*x + 27 | 4
1058: x = 24*x + 7   y = 15*x + 27  order: 11 | 4
1059: x = 24*x + 7   y = 28*x + 16 | 4
1060: x = 24*x + 8   y = 14*x + 37  order: 165 | 4
1061: x = 24*x + 8   y = 29*x + 6  | 4
1062: x = 24*x + 11  y = 7*x + 14   order: 165 | 4
1063: x = 24*x + 11  y = 36*x + 29 | 4
1064: x = 24*x + 14  y = 8*x + 24   order: 165 | 4
1065: x = 24*x + 14  y = 35*x + 19 | 4
1066: x = 24*x + 17  y = 3*x + 13   order: 55 | 4
1067: x = 24*x + 17  y = 40*x + 30 | 4
1068: x = 24*x + 20  y = 15*x + 26  order: 55 | 4
1069: x = 24*x + 20  y = 28*x + 17 | 4
1070: x = 24*x + 21  y = 10*x + 23  order: 55 | 4
1071: x = 24*x + 21  y = 33*x + 20 | 4
1072: x = 24*x + 22  y = 11*x + 0   order: 55 | 4
1073: x = 24*x + 22  y = 32*x + 0  | 4
1074: x = 24*x + 28  y = 7*x + 17   order: 33 | 4
1075: x = 24*x + 28  y = 36*x + 26 | 4
1076: x = 24*x + 29  y = 12*x + 0   order: 165 | 4
1077: x = 24*x + 29  y = 31*x + 0  | 4
1078: x = 24*x + 31  y = 21*x + 23  order: 55 | 4
1079: x = 24*x + 31  y = 22*x + 20 | 4
1080: x = 24*x + 32  y = 18*x + 12  order: 55 | 4
1081: x = 24*x + 32  y = 25*x + 31 | 4
1082: x = 24*x + 33  y = 8*x + 34   order: 33 | 4
1083: x = 24*x + 33  y = 35*x + 9  | 4
1084: x = 24*x + 35  y = 4*x + 37   order: 11 | 4
1085: x = 24*x + 35  y = 39*x + 6  | 4
1086: x = 24*x + 36  y = 6*x + 36   order: 11 | 4
1087: x = 24*x + 36  y = 37*x + 7  | 4

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1088: x = 25*x + 0   y = 13*x + 34   order: 165 | 4
1089: x = 25*x + 0   y = 30*x + 9   | 4
1090: x = 25*x + 1   y = 9*x + 35   order: 165 | 4
1091: x = 25*x + 1   y = 34*x + 8   | 4
1092: x = 25*x + 2   y = 17*x + 9   order: 165 | 4
1093: x = 25*x + 2   y = 26*x + 34   | 4
1094: x = 25*x + 4   y = 5*x + 3   order: 55 | 4
1095: x = 25*x + 4   y = 38*x + 40   | 4
1096: x = 25*x + 5   y = 5*x + 12   order: 33 | 4
1097: x = 25*x + 5   y = 38*x + 31   | 4
1098: x = 25*x + 6   y = 11*x + 9   order: 55 | 4
1099: x = 25*x + 6   y = 32*x + 34   | 4
1100: x = 25*x + 10  y = 14   order: 165 | 2
1101: x = 25*x + 10  y = 29   | 2
1102: x = 25*x + 12  y = 18*x + 18   order: 55 | 4
1103: x = 25*x + 12  y = 25*x + 25   | 4
1104: x = 25*x + 15  y = 19   order: 55 | 2
1105: x = 25*x + 15  y = 24   | 2
1106: x = 25*x + 16  y = 6*x + 19   order: 55 | 4
1107: x = 25*x + 16  y = 37*x + 24   | 4
1108: x = 25*x + 19  y = 1*x + 39   order: 55 | 4
1109: x = 25*x + 19  y = 42*x + 4   | 4
1110: x = 25*x + 20  y = 14*x + 15   order: 165 | 4
1111: x = 25*x + 20  y = 29*x + 28   | 4
1112: x = 25*x + 24  y = 18*x + 35   order: 165 | 4
1113: x = 25*x + 24  y = 25*x + 8   | 4
1114: x = 25*x + 25  y = 1*x + 14   order: 165 | 4
1115: x = 25*x + 25  y = 42*x + 29   | 4
1116: x = 25*x + 27  y = 9*x + 16   order: 33 | 4
1117: x = 25*x + 27  y = 34*x + 27   | 4
1118: x = 25*x + 29  y = 1*x + 21   order: 33 | 4
1119: x = 25*x + 29  y = 42*x + 22   | 4
1120: x = 25*x + 30  y = 8*x + 2    order: 165 | 4
1121: x = 25*x + 30  y = 35*x + 41   | 4
1122: x = 25*x + 31  y = 3*x + 9    order: 165 | 4
1123: x = 25*x + 31  y = 40*x + 34   | 4
1124: x = 25*x + 33  y = 16*x + 35   order: 165 | 4
1125: x = 25*x + 33  y = 27*x + 8   | 4
1126: x = 25*x + 38  y = 20*x + 35   order: 165 | 4
1127: x = 25*x + 38  y = 23*x + 8   | 4
1128: x = 25*x + 41  y = 1*x + 18   order: 55 | 4
1129: x = 25*x + 41  y = 42*x + 25   | 4
1130: x = 26*x + 0   y = 6*x + 26   order: 55 | 4
1131: x = 26*x + 0   y = 37*x + 17   | 4
1132: x = 26*x + 1   y = 12*x + 33   order: 165 | 4
1133: x = 26*x + 1   y = 31*x + 10   | 4
1134: x = 26*x + 3   y = 4*x + 41   order: 165 | 4
1135: x = 26*x + 3   y = 39*x + 2   | 4
1136: x = 26*x + 5   y = 5*x + 41   order: 55 | 4
1137: x = 26*x + 5   y = 38*x + 2   | 4

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1138: x = 26*x + 6   y = 1*x + 38   order: 55 | 4
1139: x = 26*x + 6   y = 42*x + 5   | 4
1140: x = 26*x + 7   y = 13*x + 20   order: 55 | 4
1141: x = 26*x + 7   y = 30*x + 23   | 4
1142: x = 26*x + 10  y = 2*x + 3    order: 55 | 4
1143: x = 26*x + 10  y = 41*x + 40   | 4
1144: x = 26*x + 11  y = 8*x + 7    order: 55 | 4
1145: x = 26*x + 11  y = 35*x + 36   | 4
1146: x = 26*x + 13  y = 10*x + 9    order: 165 | 4
1147: x = 26*x + 13  y = 33*x + 34   | 4
1148: x = 26*x + 15  y = 11*x + 37   order: 11 | 4
1149: x = 26*x + 15  y = 32*x + 6    | 4
1150: x = 26*x + 17  y = 4*x + 39    order: 55 | 4
1151: x = 26*x + 17  y = 39*x + 4    | 4
1152: x = 26*x + 18  y = 7*x + 41    order: 11 | 4
1153: x = 26*x + 18  y = 36*x + 2    | 4
1154: x = 26*x + 22  y = 8*x + 33    order: 165 | 4
1155: x = 26*x + 22  y = 35*x + 10   | 4
1156: x = 26*x + 23  y = 17*x + 24   order: 33 | 4
1157: x = 26*x + 23  y = 26*x + 19   | 4
1158: x = 26*x + 25  y = 9*x + 19    order: 165 | 4
1159: x = 26*x + 25  y = 34*x + 24   | 4
1160: x = 26*x + 26  y = 10*x + 36   order: 165 | 4
1161: x = 26*x + 26  y = 33*x + 7    | 4
1162: x = 26*x + 27  y = 19*x + 19   order: 55 | 4
1163: x = 26*x + 27  y = 24*x + 24   | 4
1164: x = 26*x + 28  y = 1           order: 55 | 2
1165: x = 26*x + 28  y = 42          | 2
1166: x = 26*x + 29  y = 3*x + 39    order: 165 | 4
1167: x = 26*x + 29  y = 40*x + 4    | 4
1168: x = 26*x + 30  y = 7*x + 13    order: 11 | 4
1169: x = 26*x + 30  y = 36*x + 30   | 4
1170: x = 26*x + 34  y = 6*x + 31    order: 55 | 4
1171: x = 26*x + 34  y = 37*x + 12   | 4
1172: x = 26*x + 36  y = 4*x + 42    order: 165 | 4
1173: x = 26*x + 36  y = 39*x + 1    | 4
1174: x = 26*x + 37  y = 14*x + 5    order: 55 | 4
1175: x = 26*x + 37  y = 29*x + 38   | 4
1176: x = 26*x + 40  y = 4*x + 14    order: 165 | 4
1177: x = 26*x + 40  y = 39*x + 29   | 4
1178: x = 26*x + 41  y = 13          order: 33 | 2
1179: x = 26*x + 41  y = 30          | 2
1180: x = 27*x + 0   y = 3*x + 37    order: 165 | 4
1181: x = 27*x + 0   y = 40*x + 6    | 4
1182: x = 27*x + 2   y = 15*x + 0    order: 55 | 4
1183: x = 27*x + 2   y = 28*x + 0    | 4
1184: x = 27*x + 3   y = 6*x + 40    order: 33 | 4
1185: x = 27*x + 3   y = 37*x + 3    | 4
1186: x = 27*x + 7   y = 8*x + 10    order: 11 | 4
1187: x = 27*x + 7   y = 35*x + 33   | 4

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1188: x = 27*x + 8   y = 8*x + 3   order: 165 | 4
1189: x = 27*x + 8   y = 35*x + 40 | 4
1190: x = 27*x + 14   y = 4*x + 8   order: 55 | 4
1191: x = 27*x + 14   y = 39*x + 35 | 4
1192: x = 27*x + 19   y = 12*x + 34  order: 33 | 4
1193: x = 27*x + 19   y = 31*x + 9   | 4
1194: x = 27*x + 22   y = 7*x + 15   order: 165 | 4
1195: x = 27*x + 22   y = 36*x + 28 | 4
1196: x = 27*x + 29   y = 10*x + 42  order: 165 | 4
1197: x = 27*x + 29   y = 33*x + 1   | 4
1198: x = 27*x + 35   y = 2*x + 16   order: 165 | 4
1199: x = 27*x + 35   y = 41*x + 27 | 4
1200: x = 27*x + 37   y = 7*x + 34   order: 165 | 4
1201: x = 27*x + 37   y = 36*x + 9   | 4
1202: x = 27*x + 42   y = 15*x + 30  order: 33 | 4
1203: x = 27*x + 42   y = 28*x + 13 | 4
1204: x = 28*x + 0    y = 10*x + 35  order: 165 | 4
1205: x = 28*x + 0    y = 33*x + 8   | 4
1206: x = 28*x + 1    y = 12*x + 1   order: 55 | 4
1207: x = 28*x + 1    y = 31*x + 42 | 4
1208: x = 28*x + 2    y = 3*x + 40   order: 165 | 4
1209: x = 28*x + 2    y = 40*x + 3   | 4
1210: x = 28*x + 5    y = 21*x + 19  order: 55 | 4
1211: x = 28*x + 5    y = 22*x + 24 | 4
1212: x = 28*x + 10   y = 3*x + 11  order: 165 | 4
1213: x = 28*x + 10   y = 40*x + 32 | 4
1214: x = 28*x + 11   y = 20*x + 15  order: 33 | 4
1215: x = 28*x + 11   y = 23*x + 28 | 4
1216: x = 28*x + 13   y = 10*x + 33  order: 55 | 4
1217: x = 28*x + 13   y = 33*x + 10 | 4
1218: x = 28*x + 14   y = 16*x + 39  order: 165 | 4
1219: x = 28*x + 14   y = 27*x + 4   | 4
1220: x = 28*x + 15   y = 18*x + 15  order: 55 | 4
1221: x = 28*x + 15   y = 25*x + 28 | 4
1222: x = 28*x + 17   y = 5*x + 1   order: 165 | 4
1223: x = 28*x + 17   y = 38*x + 42 | 4
1224: x = 28*x + 19   y = 7*x + 37   order: 33 | 4
1225: x = 28*x + 19   y = 36*x + 6   | 4
1226: x = 28*x + 21   y = 16*x + 1   order: 33 | 4
1227: x = 28*x + 21   y = 27*x + 42 | 4
1228: x = 28*x + 23   y = 21*x + 19  order: 165 | 4
1229: x = 28*x + 23   y = 22*x + 24 | 4
1230: x = 28*x + 25   y = 8*x + 24   order: 165 | 4
1231: x = 28*x + 25   y = 35*x + 19 | 4
1232: x = 28*x + 30   y = 12*x + 26  order: 55 | 4
1233: x = 28*x + 30   y = 31*x + 17 | 4
1234: x = 28*x + 31   y = 15*x + 17  order: 165 | 4
1235: x = 28*x + 31   y = 28*x + 26 | 4
1236: x = 28*x + 32   y = 6*x + 3   order: 165 | 4
1237: x = 28*x + 32   y = 37*x + 40 | 4

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1238: x = 28*x + 33  y = 17*x + 0  order: 165 | 4
1239: x = 28*x + 33  y = 26*x + 0 | 4
1240: x = 28*x + 34  y = 21*x + 12  order: 165 | 4
1241: x = 28*x + 34  y = 22*x + 31 | 4
1242: x = 28*x + 35  y = 6*x + 5  order: 55 | 4
1243: x = 28*x + 35  y = 37*x + 38 | 4
1244: x = 28*x + 37  y = 9*x + 8  order: 55 | 4
1245: x = 28*x + 37  y = 34*x + 35 | 4
1246: x = 28*x + 38  y = 7*x + 32  order: 33 | 4
1247: x = 28*x + 38  y = 36*x + 11 | 4
1248: x = 28*x + 39  y = 21  order: 165 | 2
1249: x = 28*x + 39  y = 22 | 2
1250: x = 28*x + 41  y = 16*x + 23  order: 55 | 4
1251: x = 28*x + 41  y = 27*x + 20 | 4
1252: x = 29*x + 3  y = 6*x + 40  order: 33 | 4
1253: x = 29*x + 3  y = 37*x + 3 | 4
1254: x = 29*x + 4  y = 8*x + 25  order: 165 | 4
1255: x = 29*x + 4  y = 35*x + 18 | 4
1256: x = 29*x + 7  y = 12*x + 7  order: 55 | 4
1257: x = 29*x + 7  y = 31*x + 36 | 4
1258: x = 29*x + 8  y = 15*x + 15  order: 55 | 4
1259: x = 29*x + 8  y = 28*x + 28 | 4
1260: x = 29*x + 9  y = 16*x + 16  order: 55 | 4
1261: x = 29*x + 9  y = 27*x + 27 | 4
1262: x = 29*x + 10  y = 12*x + 27  order: 55 | 4
1263: x = 29*x + 10  y = 31*x + 16 | 4
1264: x = 29*x + 11  y = 21*x + 9  order: 165 | 4
1265: x = 29*x + 11  y = 22*x + 34 | 4
1266: x = 29*x + 12  y = 16*x + 26  order: 33 | 4
1267: x = 29*x + 12  y = 27*x + 17 | 4
1268: x = 29*x + 18  y = 9*x + 1  order: 55 | 4
1269: x = 29*x + 18  y = 34*x + 42 | 4
1270: x = 29*x + 19  y = 11*x + 3  order: 165 | 4
1271: x = 29*x + 19  y = 32*x + 40 | 4
1272: x = 29*x + 20  y = 6*x + 10  order: 165 | 4
1273: x = 29*x + 20  y = 37*x + 33 | 4
1274: x = 29*x + 23  y = 15*x + 16  order: 33 | 4
1275: x = 29*x + 23  y = 28*x + 27 | 4
1276: x = 29*x + 24  y = 12*x + 12  order: 11 | 4
1277: x = 29*x + 24  y = 31*x + 31 | 4
1278: x = 29*x + 27  y = 17*x + 21  order: 165 | 4
1279: x = 29*x + 27  y = 26*x + 22 | 4
1280: x = 29*x + 29  y = 8*x + 42  order: 165 | 4
1281: x = 29*x + 29  y = 35*x + 1 | 4
1282: x = 29*x + 30  y = 7*x + 3  order: 165 | 4
1283: x = 29*x + 30  y = 36*x + 40 | 4
1284: x = 29*x + 31  y = 14*x + 34  order: 11 | 4
1285: x = 29*x + 31  y = 29*x + 9 | 4
1286: x = 29*x + 33  y = 19*x + 12  order: 33 | 4
1287: x = 29*x + 33  y = 24*x + 31 | 4

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1288: x = 29*x + 34  y = 12*x + 42  order: 55 | 4
1289: x = 29*x + 34  y = 31*x + 1  | 4
1290: x = 29*x + 35  y = 13*x + 33  order: 165 | 4
1291: x = 29*x + 35  y = 30*x + 10 | 4
1292: x = 29*x + 36  y = 4*x + 2  order: 55 | 4
1293: x = 29*x + 36  y = 39*x + 41 | 4
1294: x = 29*x + 37  y = 4*x + 29  order: 165 | 4
1295: x = 29*x + 37  y = 39*x + 14 | 4
1296: x = 29*x + 41  y = 18*x + 30  order: 11 | 4
1297: x = 29*x + 41  y = 25*x + 13 | 4
1298: x = 30*x + 0   y = 13*x + 35  order: 165 | 4
1299: x = 30*x + 0   y = 30*x + 8  | 4
1300: x = 30*x + 4   y = 10*x + 32  order: 11 | 4
1301: x = 30*x + 4   y = 33*x + 11 | 4
1302: x = 30*x + 5   y = 1*x + 35  order: 165 | 4
1303: x = 30*x + 5   y = 42*x + 8  | 4
1304: x = 30*x + 6   y = 14*x + 39  order: 165 | 4
1305: x = 30*x + 6   y = 29*x + 4  | 4
1306: x = 30*x + 8   y = 10*x + 9  order: 165 | 4
1307: x = 30*x + 8   y = 33*x + 34 | 4
1308: x = 30*x + 9   y = 8*x + 38  order: 165 | 4
1309: x = 30*x + 9   y = 35*x + 5  | 4
1310: x = 30*x + 11  y = 11*x + 9  order: 11 | 4
1311: x = 30*x + 11  y = 32*x + 34 | 4
1312: x = 30*x + 15  y = 21*x + 19  order: 33 | 4
1313: x = 30*x + 15  y = 22*x + 24 | 4
1314: x = 30*x + 19  y = 1*x + 39  order: 165 | 4
1315: x = 30*x + 19  y = 42*x + 4  | 4
1316: x = 30*x + 22  y = 10*x + 9  order: 165 | 4
1317: x = 30*x + 22  y = 33*x + 34 | 4
1318: x = 30*x + 23  y = 11*x + 6  order: 15 | 4
1319: x = 30*x + 23  y = 32*x + 37 | 4
1320: x = 30*x + 25  y = 14*x + 11  order: 165 | 4
1321: x = 30*x + 25  y = 29*x + 32 | 4
1322: x = 30*x + 26  y = 15*x + 4  order: 55 | 4
1323: x = 30*x + 26  y = 28*x + 39 | 4
1324: x = 30*x + 27  y = 7*x + 21  order: 165 | 4
1325: x = 30*x + 27  y = 36*x + 22 | 4
1326: x = 30*x + 29  y = 7*x + 42  order: 165 | 4
1327: x = 30*x + 29  y = 36*x + 1  | 4
1328: x = 30*x + 30  y = 21*x + 22  order: 55 | 4
1329: x = 30*x + 30  y = 22*x + 21 | 4
1330: x = 30*x + 31  y = 15*x + 22  order: 55 | 4
1331: x = 30*x + 31  y = 28*x + 21 | 4
1332: x = 30*x + 32  y = 18*x + 14  order: 33 | 4
1333: x = 30*x + 32  y = 25*x + 29 | 4
1334: x = 30*x + 33  y = 11*x + 22  order: 11 | 4
1335: x = 30*x + 33  y = 32*x + 21 | 4
1336: x = 30*x + 34  y = 11*x + 17  order: 165 | 4
1337: x = 30*x + 34  y = 32*x + 26 | 4

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1338: x = 30*x + 37  y = 6*x + 40  order: 33 | 4
1339: x = 30*x + 37  y = 37*x + 3  | 4
1340: x = 30*x + 38  y = 16*x + 6  order: 165 | 4
1341: x = 30*x + 38  y = 27*x + 37 | 4
1342: x = 30*x + 39  y = 8*x + 1  order: 55 | 4
1343: x = 30*x + 39  y = 35*x + 42 | 4
1344: x = 31*x + 1   y = 8*x + 23  order: 165 | 4
1345: x = 31*x + 1   y = 35*x + 20 | 4
1346: x = 31*x + 3   y = 10*x + 40  order: 33 | 4
1347: x = 31*x + 3   y = 33*x + 3  | 4
1348: x = 31*x + 4   y = 20*x + 19  order: 165 | 4
1349: x = 31*x + 4   y = 23*x + 24 | 4
1350: x = 31*x + 5   y = 1*x + 39  order: 165 | 4
1351: x = 31*x + 5   y = 42*x + 4  | 4
1352: x = 31*x + 8   y = 8  order: 165 | 2
1353: x = 31*x + 8   y = 35 | 2
1354: x = 31*x + 10  y = 8*x + 41  order: 165 | 4
1355: x = 31*x + 10  y = 35*x + 2  | 4
1356: x = 31*x + 11  y = 7*x + 7  order: 55 | 4
1357: x = 31*x + 11  y = 36*x + 36 | 4
1358: x = 31*x + 12  y = 13*x + 36  order: 33 | 4
1359: x = 31*x + 12  y = 30*x + 7  | 4
1360: x = 31*x + 17  y = 17*x + 29  order: 55 | 4
1361: x = 31*x + 17  y = 26*x + 14 | 4
1362: x = 31*x + 20  y = 4*x + 35  order: 165 | 4
1363: x = 31*x + 20  y = 39*x + 8  | 4
1364: x = 31*x + 23  y = 14*x + 7  order: 165 | 4
1365: x = 31*x + 23  y = 29*x + 36 | 4
1366: x = 31*x + 25  y = 17*x + 37  order: 165 | 4
1367: x = 31*x + 25  y = 26*x + 6  | 4
1368: x = 31*x + 26  y = 11*x + 9  order: 55 | 4
1369: x = 31*x + 26  y = 32*x + 34 | 4
1370: x = 31*x + 30  y = 19*x + 39  order: 165 | 4
1371: x = 31*x + 30  y = 24*x + 4  | 4
1372: x = 31*x + 33  y = 5*x + 27  order: 33 | 4
1373: x = 31*x + 33  y = 38*x + 16 | 4
1374: x = 31*x + 36  y = 14*x + 12  order: 165 | 4
1375: x = 31*x + 36  y = 29*x + 31 | 4
1376: x = 31*x + 40  y = 13*x + 19  order: 33 | 4
1377: x = 31*x + 40  y = 30*x + 24 | 4
1378: x = 31*x + 41  y = 6*x + 27  order: 33 | 4
1379: x = 31*x + 41  y = 37*x + 16 | 4
1380: x = 32*x + 0   y = 11*x + 29  order: 55 | 4
1381: x = 32*x + 0   y = 32*x + 14 | 4
1382: x = 32*x + 1   y = 16*x + 40  order: 165 | 4
1383: x = 32*x + 1   y = 27*x + 3  | 4
1384: x = 32*x + 2   y = 14*x + 24  order: 33 | 4
1385: x = 32*x + 2   y = 29*x + 19 | 4
1386: x = 32*x + 3   y = 3*x + 0  order: 165 | 4
1387: x = 32*x + 3   y = 40*x + 0  | 4

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1388: x = 32*x + 7  y = 13*x + 12  order: 165 | 4
1389: x = 32*x + 7  y = 30*x + 31 | 4
1390: x = 32*x + 12  y = 4*x + 30  order: 165 | 4
1391: x = 32*x + 12  y = 39*x + 13 | 4
1392: x = 32*x + 13  y = 8*x + 19  order: 165 | 4
1393: x = 32*x + 13  y = 35*x + 24 | 4
1394: x = 32*x + 14  y = 11*x + 20  order: 55 | 4
1395: x = 32*x + 14  y = 32*x + 23 | 4
1396: x = 32*x + 19  y = 13*x + 24  order: 165 | 4
1397: x = 32*x + 19  y = 30*x + 19 | 4
1398: x = 32*x + 21  y = 11*x + 10  order: 165 | 4
1399: x = 32*x + 21  y = 32*x + 33 | 4
1400: x = 32*x + 22  y = 18*x + 16  order: 55 | 4
1401: x = 32*x + 22  y = 25*x + 27 | 4
1402: x = 32*x + 25  y = 16*x + 38  order: 165 | 4
1403: x = 32*x + 25  y = 27*x + 5 | 4
1404: x = 32*x + 27  y = 7*x + 30  order: 165 | 4
1405: x = 32*x + 27  y = 36*x + 13 | 4
1406: x = 32*x + 28  y = 16*x + 12  order: 33 | 4
1407: x = 32*x + 28  y = 27*x + 31 | 4
1408: x = 32*x + 29  y = 3*x + 0  order: 55 | 4
1409: x = 32*x + 29  y = 40*x + 0 | 4
1410: x = 32*x + 31  y = 7*x + 6  order: 165 | 4
1411: x = 32*x + 31  y = 36*x + 37 | 4
1412: x = 32*x + 33  y = 1*x + 37  order: 11 | 4
1413: x = 32*x + 33  y = 42*x + 6 | 4
1414: x = 32*x + 34  y = 16*x + 36  order: 165 | 4
1415: x = 32*x + 34  y = 27*x + 7 | 4
1416: x = 32*x + 35  y = 12*x + 5  order: 33 | 4
1417: x = 32*x + 35  y = 31*x + 38 | 4
1418: x = 32*x + 36  y = 7*x + 2  order: 55 | 4
1419: x = 32*x + 36  y = 36*x + 41 | 4
1420: x = 32*x + 38  y = 21*x + 30  order: 33 | 4
1421: x = 32*x + 38  y = 22*x + 13 | 4
1422: x = 32*x + 39  y = 11*x + 28  order: 165 | 4
1423: x = 32*x + 39  y = 32*x + 15 | 4
1424: x = 32*x + 41  y = 12*x + 29  order: 165 | 4
1425: x = 32*x + 41  y = 31*x + 14 | 4
1426: x = 33*x + 0  y = 2*x + 35  order: 165 | 4
1427: x = 33*x + 0  y = 41*x + 8 | 4
1428: x = 33*x + 1  y = 19*x + 1  order: 55 | 4
1429: x = 33*x + 1  y = 24*x + 42 | 4
1430: x = 33*x + 3  y = 14*x + 10  order: 55 | 4
1431: x = 33*x + 3  y = 29*x + 33 | 4
1432: x = 33*x + 4  y = 15*x + 32  order: 165 | 4
1433: x = 33*x + 4  y = 28*x + 11 | 4
1434: x = 33*x + 5  y = 1*x + 40  order: 165 | 4
1435: x = 33*x + 5  y = 42*x + 3 | 4
1436: x = 33*x + 7  y = 14*x + 41  order: 165 | 4
1437: x = 33*x + 7  y = 29*x + 2 | 4

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1438: x = 33*x + 10  y = 7*x + 30  order: 165 | 4
1439: x = 33*x + 10  y = 36*x + 13 | 4
1440: x = 33*x + 11  y = 11  order: 33 | 2
1441: x = 33*x + 11  y = 32 | 2
1442: x = 33*x + 12  y = 17*x + 11  order: 165 | 4
1443: x = 33*x + 12  y = 26*x + 32 | 4
1444: x = 33*x + 15  y = 13*x + 14  order: 165 | 4
1445: x = 33*x + 15  y = 30*x + 29 | 4
1446: x = 33*x + 16  y = 13*x + 13  order: 165 | 4
1447: x = 33*x + 16  y = 30*x + 30 | 4
1448: x = 33*x + 22  y = 7  order: 165 | 2
1449: x = 33*x + 22  y = 36 | 2
1450: x = 33*x + 26  y = 12*x + 17  order: 165 | 4
1451: x = 33*x + 26  y = 31*x + 26 | 4
1452: x = 33*x + 27  y = 5*x + 42  order: 165 | 4
1453: x = 33*x + 27  y = 38*x + 1 | 4
1454: x = 33*x + 28  y = 5*x + 19  order: 55 | 4
1455: x = 33*x + 28  y = 38*x + 24 | 4
1456: x = 33*x + 34  y = 11*x + 22  order: 165 | 4
1457: x = 33*x + 34  y = 32*x + 21 | 4
1458: x = 33*x + 38  y = 2*x + 29  order: 165 | 4
1459: x = 33*x + 38  y = 41*x + 14 | 4
1460: x = 33*x + 39  y = 20*x + 40  order: 165 | 4
1461: x = 33*x + 39  y = 23*x + 3 | 4
1462: x = 33*x + 40  y = 18*x + 4  order: 55 | 4
1463: x = 33*x + 40  y = 25*x + 39 | 4
1464: x = 34*x + 0  y = 15*x + 32  order: 165 | 4
1465: x = 34*x + 0  y = 28*x + 11 | 4
1466: x = 34*x + 1  y = 14*x + 19  order: 165 | 4
1467: x = 34*x + 1  y = 29*x + 24 | 4
1468: x = 34*x + 4  y = 8*x + 24  order: 55 | 4
1469: x = 34*x + 4  y = 35*x + 19 | 4
1470: x = 34*x + 5  y = 11*x + 39  order: 55 | 4
1471: x = 34*x + 5  y = 32*x + 4 | 4
1472: x = 34*x + 9  y = 2*x + 5  order: 165 | 4
1473: x = 34*x + 9  y = 41*x + 38 | 4
1474: x = 34*x + 10  y = 17*x + 31  order: 11 | 4
1475: x = 34*x + 10  y = 26*x + 12 | 4
1476: x = 34*x + 12  y = 14*x + 16  order: 165 | 4
1477: x = 34*x + 12  y = 29*x + 27 | 4
1478: x = 34*x + 13  y = 12*x + 32  order: 165 | 4
1479: x = 34*x + 13  y = 31*x + 11 | 4
1480: x = 34*x + 16  y = 9*x + 33  order: 33 | 4
1481: x = 34*x + 16  y = 34*x + 10 | 4
1482: x = 34*x + 18  y = 12*x + 22  order: 165 | 4
1483: x = 34*x + 18  y = 31*x + 21 | 4
1484: x = 34*x + 19  y = 20*x + 38  order: 165 | 4
1485: x = 34*x + 19  y = 23*x + 5 | 4
1486: x = 34*x + 21  y = 15*x + 24  order: 55 | 4
1487: x = 34*x + 21  y = 28*x + 19 | 4

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1488: x = 34*x + 22  y = 12*x + 38  order: 11 | 4
1489: x = 34*x + 22  y = 31*x + 5   | 4
1490: x = 34*x + 23  y = 9*x + 2   order: 165 | 4
1491: x = 34*x + 23  y = 34*x + 41 | 4
1492: x = 34*x + 27  y = 5*x + 23  order: 165 | 4
1493: x = 34*x + 27  y = 38*x + 20 | 4
1494: x = 34*x + 28  y = 12*x + 16  order: 55 | 4
1495: x = 34*x + 28  y = 31*x + 27 | 4
1496: x = 34*x + 31  y = 3*x + 5   order: 165 | 4
1497: x = 34*x + 31  y = 40*x + 38 | 4
1498: x = 34*x + 33  y = 20*x + 27  order: 165 | 4
1499: x = 34*x + 33  y = 23*x + 16 | 4
1500: x = 34*x + 35  y = 15*x + 22  order: 165 | 4
1501: x = 34*x + 35  y = 28*x + 21 | 4
1502: x = 34*x + 36  y = 21*x + 37  order: 165 | 4
1503: x = 34*x + 36  y = 22*x + 6   | 4
1504: x = 34*x + 40  y = 8*x + 40   order: 165 | 4
1505: x = 34*x + 40  y = 35*x + 3   | 4
1506: x = 35*x + 0   y = 3*x + 34   order: 165 | 4
1507: x = 35*x + 0   y = 40*x + 9   | 4
1508: x = 35*x + 1   y = 10*x + 19  order: 165 | 4
1509: x = 35*x + 1   y = 33*x + 24  | 4
1510: x = 35*x + 5   y = 2*x + 36   order: 165 | 4
1511: x = 35*x + 5   y = 41*x + 7   | 4
1512: x = 35*x + 6   y = 8*x + 38   order: 11 | 4
1513: x = 35*x + 6   y = 35*x + 5   | 4
1514: x = 35*x + 7   y = 12*x + 22  order: 55 | 4
1515: x = 35*x + 7   y = 31*x + 21  | 4
1516: x = 35*x + 8   y = 4*x + 24   order: 33 | 4
1517: x = 35*x + 8   y = 39*x + 19  | 4
1518: x = 35*x + 9   y = 1*x + 25   order: 165 | 4
1519: x = 35*x + 9   y = 42*x + 18  | 4
1520: x = 35*x + 14  y = 15*x + 17  order: 33 | 4
1521: x = 35*x + 14  y = 28*x + 26  | 4
1522: x = 35*x + 17  y = 14*x + 29  order: 165 | 4
1523: x = 35*x + 17  y = 29*x + 14  | 4
1524: x = 35*x + 20  y = 11*x + 25  order: 33 | 4
1525: x = 35*x + 20  y = 32*x + 18  | 4
1526: x = 35*x + 22  y = 7*x + 4    order: 165 | 4
1527: x = 35*x + 22  y = 36*x + 39  | 4
1528: x = 35*x + 24  y = 17*x + 21  order: 33 | 4
1529: x = 35*x + 24  y = 26*x + 22  | 4
1530: x = 35*x + 27  y = 8*x + 15   order: 33 | 4
1531: x = 35*x + 27  y = 35*x + 28  | 4
1532: x = 35*x + 28  y = 9*x + 33   order: 165 | 4
1533: x = 35*x + 28  y = 34*x + 10  | 4
1534: x = 35*x + 30  y = 12*x + 19  order: 165 | 4
1535: x = 35*x + 30  y = 31*x + 24  | 4
1536: x = 35*x + 32  y = 18*x + 39  order: 33 | 4
1537: x = 35*x + 32  y = 25*x + 4   | 4

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1538: x = 35*x + 34  y = 14*x + 17  order: 165 | 4
1539: x = 35*x + 34  y = 29*x + 26 | 4
1540: x = 35*x + 35  y = 16*x + 2  order: 165 | 4
1541: x = 35*x + 35  y = 27*x + 41 | 4
1542: x = 35*x + 36  y = 2*x + 38  order: 55 | 4
1543: x = 35*x + 36  y = 41*x + 5 | 4
1544: x = 35*x + 38  y = 19*x + 6  order: 33 | 4
1545: x = 35*x + 38  y = 24*x + 37 | 4
1546: x = 35*x + 40  y = 6*x + 17  order: 55 | 4
1547: x = 35*x + 40  y = 37*x + 26 | 4
1548: x = 35*x + 41  y = 5*x + 25  order: 165 | 4
1549: x = 35*x + 41  y = 38*x + 18 | 4
1550: x = 36*x + 0   y = 10*x + 42  order: 33 | 4
1551: x = 36*x + 0   y = 33*x + 1 | 4
1552: x = 36*x + 1   y = 13*x + 7  order: 165 | 4
1553: x = 36*x + 1   y = 30*x + 36 | 4
1554: x = 36*x + 2   y = 21*x + 14  order: 165 | 4
1555: x = 36*x + 2   y = 22*x + 29 | 4
1556: x = 36*x + 4   y = 20*x + 14  order: 165 | 4
1557: x = 36*x + 4   y = 23*x + 29 | 4
1558: x = 36*x + 6   y = 19*x + 30  order: 165 | 4
1559: x = 36*x + 6   y = 24*x + 13 | 4
1560: x = 36*x + 8   y = 9*x + 37  order: 165 | 4
1561: x = 36*x + 8   y = 34*x + 6 | 4
1562: x = 36*x + 9   y = 6*x + 42  order: 33 | 4
1563: x = 36*x + 9   y = 37*x + 1 | 4
1564: x = 36*x + 10  y = 4*x + 3  order: 165 | 4
1565: x = 36*x + 10  y = 39*x + 40 | 4
1566: x = 36*x + 12  y = 7*x + 0  order: 165 | 4
1567: x = 36*x + 12  y = 36*x + 0 | 4
1568: x = 36*x + 19  y = 11*x + 23  order: 33 | 4
1569: x = 36*x + 19  y = 32*x + 20 | 4
1570: x = 36*x + 22  y = 21*x + 5  order: 165 | 4
1571: x = 36*x + 22  y = 22*x + 38 | 4
1572: x = 36*x + 23  y = 17*x + 5  order: 55 | 4
1573: x = 36*x + 23  y = 26*x + 38 | 4
1574: x = 36*x + 24  y = 4*x + 12  order: 165 | 4
1575: x = 36*x + 24  y = 39*x + 31 | 4
1576: x = 36*x + 27  y = 12*x + 4  order: 55 | 4
1577: x = 36*x + 27  y = 31*x + 39 | 4
1578: x = 36*x + 29  y = 18*x + 13  order: 165 | 4
1579: x = 36*x + 29  y = 25*x + 30 | 4
1580: x = 36*x + 32  y = 13*x + 11  order: 165 | 4
1581: x = 36*x + 32  y = 30*x + 32 | 4
1582: x = 36*x + 35  y = 3*x + 18  order: 165 | 4
1583: x = 36*x + 35  y = 40*x + 25 | 4
1584: x = 36*x + 38  y = 19*x + 13  order: 165 | 4
1585: x = 36*x + 38  y = 24*x + 30 | 4
1586: x = 36*x + 41  y = 6*x + 32  order: 33 | 4
1587: x = 36*x + 41  y = 37*x + 11 | 4

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1588: x = 37*x + 0   y = 19*x + 41   order: 165 | 4
1589: x = 37*x + 0   y = 24*x + 2   | 4
1590: x = 37*x + 2   y = 16*x + 27   order: 55 | 4
1591: x = 37*x + 2   y = 27*x + 16   | 4
1592: x = 37*x + 4   y = 20*x + 23   order: 55 | 4
1593: x = 37*x + 4   y = 23*x + 20   | 4
1594: x = 37*x + 6   y = 17*x + 41   order: 165 | 4
1595: x = 37*x + 6   y = 26*x + 2   | 4
1596: x = 37*x + 8   y = 6*x + 10   order: 165 | 4
1597: x = 37*x + 8   y = 37*x + 33   | 4
1598: x = 37*x + 11  y = 2*x + 7   order: 165 | 4
1599: x = 37*x + 11  y = 41*x + 36   | 4
1600: x = 37*x + 12  y = 3*x + 26   order: 33 | 4
1601: x = 37*x + 12  y = 40*x + 17   | 4
1602: x = 37*x + 16  y = 7*x + 5   order: 165 | 4
1603: x = 37*x + 16  y = 36*x + 38   | 4
1604: x = 37*x + 18  y = 18   order: 55 | 2
1605: x = 37*x + 18  y = 25   | 2
1606: x = 37*x + 19  y = 20*x + 10   order: 165 | 4
1607: x = 37*x + 19  y = 23*x + 33   | 4
1608: x = 37*x + 20  y = 7*x + 4   order: 55 | 4
1609: x = 37*x + 20  y = 36*x + 39   | 4
1610: x = 37*x + 21  y = 11*x + 26   order: 165 | 4
1611: x = 37*x + 21  y = 32*x + 17   | 4
1612: x = 37*x + 24  y = 7*x + 11   order: 33 | 4
1613: x = 37*x + 24  y = 36*x + 32   | 4
1614: x = 37*x + 25  y = 1*x + 31   order: 165 | 4
1615: x = 37*x + 25  y = 42*x + 12   | 4
1616: x = 37*x + 28  y = 17*x + 38   order: 55 | 4
1617: x = 37*x + 28  y = 26*x + 5   | 4
1618: x = 37*x + 29  y = 16*x + 16   order: 165 | 4
1619: x = 37*x + 29  y = 27*x + 27   | 4
1620: x = 37*x + 30  y = 7*x + 15   order: 165 | 4
1621: x = 37*x + 30  y = 36*x + 28   | 4
1622: x = 37*x + 40  y = 2*x + 29   order: 11 | 4
1623: x = 37*x + 40  y = 41*x + 14   | 4
1624: x = 38*x + 2   y = 6*x + 29   order: 165 | 4
1625: x = 38*x + 2   y = 37*x + 14   | 4
1626: x = 38*x + 7   y = 13*x + 36   order: 165 | 4
1627: x = 38*x + 7   y = 30*x + 7   | 4
1628: x = 38*x + 8   y = 7*x + 0   order: 165 | 4
1629: x = 38*x + 8   y = 36*x + 0   | 4
1630: x = 38*x + 9   y = 2*x + 3   order: 165 | 4
1631: x = 38*x + 9   y = 41*x + 40   | 4
1632: x = 38*x + 12  y = 5*x + 11   order: 55 | 4
1633: x = 38*x + 12  y = 38*x + 32   | 4
1634: x = 38*x + 14  y = 12*x + 12   order: 165 | 4
1635: x = 38*x + 14  y = 31*x + 31   | 4
1636: x = 38*x + 15  y = 11*x + 26   order: 165 | 4
1637: x = 38*x + 15  y = 32*x + 17   | 4

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1638: x = 38*x + 17  y = 20*x + 29  order: 55 | 4
1639: x = 38*x + 17  y = 23*x + 14 | 4
1640: x = 38*x + 19  y = 16*x + 39  order: 33 | 4
1641: x = 38*x + 19  y = 27*x + 4 | 4
1642: x = 38*x + 21  y = 7*x + 24  order: 55 | 4
1643: x = 38*x + 21  y = 36*x + 19 | 4
1644: x = 38*x + 22  y = 2*x + 11  order: 55 | 4
1645: x = 38*x + 22  y = 41*x + 32 | 4
1646: x = 38*x + 23  y = 7*x + 5  order: 165 | 4
1647: x = 38*x + 23  y = 36*x + 38 | 4
1648: x = 38*x + 27  y = 13*x + 16  order: 165 | 4
1649: x = 38*x + 27  y = 30*x + 27 | 4
1650: x = 38*x + 30  y = 4*x + 12  order: 55 | 4
1651: x = 38*x + 30  y = 39*x + 31 | 4
1652: x = 38*x + 32  y = 10*x + 16  order: 55 | 4
1653: x = 38*x + 32  y = 33*x + 27 | 4
1654: x = 38*x + 35  y = 7*x + 12  order: 33 | 4
1655: x = 38*x + 35  y = 36*x + 31 | 4
1656: x = 38*x + 42  y = 18*x + 18  order: 165 | 4
1657: x = 38*x + 42  y = 25*x + 25 | 4
1658: x = 39*x + 0   y = 12*x + 29  order: 165 | 4
1659: x = 39*x + 0   y = 31*x + 14 | 4
1660: x = 39*x + 1   y = 9*x + 39  order: 55 | 4
1661: x = 39*x + 1   y = 34*x + 4 | 4
1662: x = 39*x + 5   y = 16*x + 3  order: 165 | 4
1663: x = 39*x + 5   y = 27*x + 40 | 4
1664: x = 39*x + 7   y = 15*x + 8  order: 165 | 4
1665: x = 39*x + 7   y = 28*x + 35 | 4
1666: x = 39*x + 8   y = 11*x + 31  order: 165 | 4
1667: x = 39*x + 8   y = 32*x + 12 | 4
1668: x = 39*x + 10  y = 8*x + 41  order: 165 | 4
1669: x = 39*x + 10  y = 35*x + 2 | 4
1670: x = 39*x + 15  y = 12*x + 37  order: 165 | 4
1671: x = 39*x + 15  y = 31*x + 6 | 4
1672: x = 39*x + 17  y = 9*x + 5  order: 165 | 4
1673: x = 39*x + 17  y = 34*x + 38 | 4
1674: x = 39*x + 18  y = 1*x + 29  order: 55 | 4
1675: x = 39*x + 18  y = 42*x + 14 | 4
1676: x = 39*x + 19  y = 8*x + 1  order: 55 | 4
1677: x = 39*x + 19  y = 35*x + 42 | 4
1678: x = 39*x + 20  y = 11*x + 17  order: 165 | 4
1679: x = 39*x + 20  y = 32*x + 26 | 4
1680: x = 39*x + 21  y = 8*x + 21  order: 165 | 4
1681: x = 39*x + 21  y = 35*x + 22 | 4
1682: x = 39*x + 22  y = 20*x + 7  order: 55 | 4
1683: x = 39*x + 22  y = 23*x + 36 | 4
1684: x = 39*x + 25  y = 8*x + 0  order: 55 | 4
1685: x = 39*x + 25  y = 35*x + 0 | 4
1686: x = 39*x + 26  y = 3*x + 17  order: 165 | 4
1687: x = 39*x + 26  y = 40*x + 26 | 4

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1688: x = 39*x + 27  y = 16*x + 7  order: 165 | 4
1689: x = 39*x + 27  y = 27*x + 36 | 4
1690: x = 39*x + 33  y = 20*x + 23  order: 165 | 4
1691: x = 39*x + 33  y = 23*x + 20 | 4
1692: x = 39*x + 34  y = 15*x + 38  order: 165 | 4
1693: x = 39*x + 34  y = 28*x + 5 | 4
1694: x = 39*x + 38  y = 16*x + 18  order: 55 | 4
1695: x = 39*x + 38  y = 27*x + 25 | 4
1696: x = 39*x + 39  y = 16*x + 36  order: 165 | 4
1697: x = 39*x + 39  y = 27*x + 7 | 4
1698: x = 39*x + 42  y = 19*x + 8  order: 165 | 4
1699: x = 39*x + 42  y = 24*x + 35 | 4
1700: x = 40*x + 1   y = 18*x + 4  order: 165 | 4
1701: x = 40*x + 1   y = 25*x + 39 | 4
1702: x = 40*x + 4   y = 17*x + 31  order: 55 | 4
1703: x = 40*x + 4   y = 26*x + 12 | 4
1704: x = 40*x + 6   y = 16*x + 34  order: 55 | 4
1705: x = 40*x + 6   y = 27*x + 9 | 4
1706: x = 40*x + 7   y = 16*x + 8  order: 165 | 4
1707: x = 40*x + 7   y = 27*x + 35 | 4
1708: x = 40*x + 9   y = 11*x + 31  order: 165 | 4
1709: x = 40*x + 9   y = 32*x + 12 | 4
1710: x = 40*x + 11  y = 6*x + 26  order: 165 | 4
1711: x = 40*x + 11  y = 37*x + 17 | 4
1712: x = 40*x + 12  y = 11*x + 25  order: 165 | 4
1713: x = 40*x + 12  y = 32*x + 18 | 4
1714: x = 40*x + 13  y = 2*x + 13  order: 11 | 4
1715: x = 40*x + 13  y = 41*x + 30 | 4
1716: x = 40*x + 18  y = 20*x + 31  order: 165 | 4
1717: x = 40*x + 18  y = 23*x + 12 | 4
1718: x = 40*x + 20  y = 17*x + 33  order: 165 | 4
1719: x = 40*x + 20  y = 26*x + 10 | 4
1720: x = 40*x + 22  y = 12*x + 41  order: 55 | 4
1721: x = 40*x + 22  y = 31*x + 2 | 4
1722: x = 40*x + 23  y = 8*x + 8  order: 33 | 4
1723: x = 40*x + 23  y = 35*x + 35 | 4
1724: x = 40*x + 29  y = 10*x + 36  order: 165 | 4
1725: x = 40*x + 29  y = 33*x + 7 | 4
1726: x = 40*x + 30  y = 12*x + 5  order: 165 | 4
1727: x = 40*x + 30  y = 31*x + 38 | 4
1728: x = 40*x + 32  y = 10*x + 27  order: 33 | 4
1729: x = 40*x + 32  y = 33*x + 16 | 4
1730: x = 40*x + 33  y = 10  order: 55 | 2
1731: x = 40*x + 33  y = 33 | 2
1732: x = 40*x + 35  y = 18*x + 38  order: 165 | 4
1733: x = 40*x + 35  y = 25*x + 5 | 4
1734: x = 40*x + 41  y = 2*x + 34  order: 11 | 4
1735: x = 40*x + 41  y = 41*x + 9 | 4
1736: x = 41*x + 0   y = 18*x + 1  order: 55 | 4
1737: x = 41*x + 0   y = 25*x + 42 | 4

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1738: x = 41*x + 3   y = 13*x + 30   order: 165 | 4
1739: x = 41*x + 3   y = 30*x + 13   | 4
1740: x = 41*x + 9   y = 9*x + 20   order: 33 | 4
1741: x = 41*x + 9   y = 34*x + 23   | 4
1742: x = 41*x + 11  y = 19*x + 28   order: 165 | 4
1743: x = 41*x + 11  y = 24*x + 15   | 4
1744: x = 41*x + 12  y = 2*x + 21   order: 165 | 4
1745: x = 41*x + 12  y = 41*x + 22   | 4
1746: x = 41*x + 13  y = 5*x + 33   order: 55 | 4
1747: x = 41*x + 13  y = 38*x + 10   | 4
1748: x = 41*x + 17  y = 15*x + 15   order: 55 | 4
1749: x = 41*x + 17  y = 28*x + 28   | 4
1750: x = 41*x + 18  y = 2*x + 34   order: 55 | 4
1751: x = 41*x + 18  y = 41*x + 9    | 4
1752: x = 41*x + 19  y = 9*x + 6    order: 165 | 4
1753: x = 41*x + 19  y = 34*x + 37   | 4
1754: x = 41*x + 20  y = 7*x + 37   order: 33 | 4
1755: x = 41*x + 20  y = 36*x + 6    | 4
1756: x = 41*x + 28  y = 21*x + 28   order: 165 | 4
1757: x = 41*x + 28  y = 22*x + 15   | 4
1758: x = 41*x + 31  y = 2*x + 7    order: 165 | 4
1759: x = 41*x + 31  y = 41*x + 36   | 4
1760: x = 41*x + 33  y = 19*x + 4    order: 165 | 4
1761: x = 41*x + 33  y = 24*x + 39   | 4
1762: x = 41*x + 36  y = 15*x + 21   order: 165 | 4
1763: x = 41*x + 36  y = 28*x + 22   | 4
1764: x = 41*x + 37  y = 3*x + 37   order: 55 | 4
1765: x = 41*x + 37  y = 40*x + 6    | 4
1766: x = 42*x + 1   y = 4*x + 4    order: 165 | 4
1767: x = 42*x + 1   y = 39*x + 39   | 4
1768: x = 42*x + 2   y = 19*x + 13   order: 165 | 4
1769: x = 42*x + 2   y = 24*x + 30   | 4
1770: x = 42*x + 3   y = 15*x + 40   order: 11 | 4
1771: x = 42*x + 3   y = 28*x + 3    | 4
1772: x = 42*x + 6   y = 9*x + 25   order: 33 | 4
1773: x = 42*x + 6   y = 34*x + 18   | 4
1774: x = 42*x + 9   y = 5*x + 25   order: 165 | 4
1775: x = 42*x + 9   y = 38*x + 18   | 4
1776: x = 42*x + 10  y = 10*x + 24   order: 165 | 4
1777: x = 42*x + 10  y = 33*x + 19   | 4
1778: x = 42*x + 14  y = 14*x + 16   order: 165 | 4
1779: x = 42*x + 14  y = 29*x + 27   | 4
1780: x = 42*x + 16  y = 9*x + 1     order: 55 | 4
1781: x = 42*x + 16  y = 34*x + 42   | 4
1782: x = 42*x + 18  y = 3*x + 42   order: 55 | 4
1783: x = 42*x + 18  y = 40*x + 1    | 4
1784: x = 42*x + 19  y = 10*x + 5    order: 165 | 4
1785: x = 42*x + 19  y = 33*x + 38   | 4
1786: x = 42*x + 21  y = 19*x + 20   order: 165 | 4
1787: x = 42*x + 21  y = 24*x + 23   | 4

```



```

1788: x = 42*x + 22  y = 18*x + 20  order: 55 | 4
1789: x = 42*x + 22  y = 25*x + 23 | 4
1790: x = 42*x + 23  y = 12  order: 15 | 2
1791: x = 42*x + 23  y = 31 | 2
1792: x = 42*x + 24  y = 2*x + 8  order: 165 | 4
1793: x = 42*x + 24  y = 41*x + 35 | 4
1794: x = 42*x + 25  y = 8*x + 34  order: 55 | 4
1795: x = 42*x + 25  y = 35*x + 9 | 4
1796: x = 42*x + 26  y = 21*x + 9  order: 55 | 4
1797: x = 42*x + 26  y = 22*x + 34 | 4
1798: x = 42*x + 28  y = 12*x + 38  order: 165 | 4
1799: x = 42*x + 28  y = 31*x + 5 | 4
1800: x = 42*x + 34  y = 8*x + 8  order: 165 | 4
1801: x = 42*x + 34  y = 35*x + 35 | 4
1802: x = 42*x + 36  y = 17*x + 32  order: 55 | 4
1803: x = 42*x + 36  y = 26*x + 11 | 4
1804: x = 42*x + 38  y = 4*x + 8  order: 11 | 4
1805: x = 42*x + 38  y = 39*x + 35 | 4
1806: x = 42*x + 39  y = 2*x + 19  order: 33 | 4
1807: x = 42*x + 39  y = 41*x + 24 | 4
1808: x = 42*x + 40  y = 6*x + 32  order: 165 | 4
1809: x = 42*x + 40  y = 37*x + 11 | 4
1810: x = 42*x + 41  y = 16*x + 30  order: 165 | 4
1811: x = 42*x + 41  y = 27*x + 13 | 4
1812: x = 42*x + 42  y = 21*x + 10  order: 55 | 4
1813: x = 42*x + 42  y = 22*x + 33 | 4

```