



Paraboctys (part 3)

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November 12, 2020

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Received: 08 Nov 2020

Revised: DD Month YYYY

Accepted: DD Month YYYY

Abstract: This study is a continuation of paraboctys part 2 and continues in paraboctys part 4.

Keywords: Quadratics, Sieve of Primes, elementary number theory.

2010 Mathematics Subject Classification: 11N35, 11N36, 11A05, 11A51.

1 Introduction

This study is a continuation of paraboctys part 2 and continues in paraboctys part 4.

Please, as reference consult the *Conventions, notations, and abbreviations* study [2]. The latest version at <https://1drv.ms/b/s!Arslv070x3WjjYUpsGLsNeWwfH6OdA?e=K1C4q5>

As we saw before, all the vertical and diagonal sequence lines in the specific paraboctys represent quadratic sequences. This is because the specific paraboctys is a parabolic lattice-grid.

Now we will see what the parabolic curves (parabolas) represent when drawn in a specific paraboctys lattice-grid.

We will start with the specific paraboctys $PS[x + 2, x, x]$ that was the first paraboctys that we arrived because of our reasoning. Next, we will analyze the specific paraboctys $PS[x + 1, x, x + 1]$. With this, we study all the possibilities of specific paraboctys with coefficient $a = 1$.

For your reference, see the main topics that we will cover here:

- 2.1 The D-Destroyer parabolas with offset Zero in $PS[x + 2, x, x]$
- 2.2 The D-Destroyer parabolas with variable offset on a vertical of $PS[x + 2, x, x]$
- 2.3 The D-Submarine parabolas with variable offset on a vertical of $PS[x + 2, x, x]$
- 2.4 The D-Destroyer and D-Submarine interleaving parabolas with a varying offset in $PS[x + 2, x, x]$
- 2.5 Dividing the specific trianz $TZ[x + 2, x, x]$ according to the value of $\lfloor \sqrt{n} \rfloor$
- 3.1 The C-Destroyer parabolas with offset Zero in $PS[x + 2, x, x]$
- 3.2 The C-Destroyer parabolas with variable offset on a vertical of $PS[x + 2, x, x]$
- 3.3 The C-Submarine parabolas with variable offset on a vertical of $PS[x + 2, x, x]$
- 3.4 The C-Destroyer and C-Submarine interleaving parabolas with a varying offset in $PS[x + 2, x, x]$
- 4.1 The D-Submarine parabolas with offset Zero in $PS[x + 1, x, x + 1]$
- 4.2 The D-Destroyer parabolas with variable offset on a vertical of $PS[x + 1, x, x + 1]$

- 4.3 The D-Submarine parabolas with a varying offset in $PS[x + 1, x, x + 1]$
- 4.4 The D-Destroyer and D-Submarine interleaving parabolas with a varying offset in $PS[x + 1, x, x + 1]$
- 5.1 The C-Submarine parabolas with offset Zero in $PS[x + 1, x, x + 1]$
- 5.2 The C-Destroyer parabolas with variable offset on a vertical of $PS[x + 1, x, x + 1]$
- 5.3 The C-Submarine parabolas with variable offset on a vertical of $PS[x + 1, x, x + 1]$
- 5.4 The C-Destroyer and C-Submarine interleaving parabolas with a varying offset in $PS[x + 1, x, x + 1]$
- 6 Conclusions

2 Study of the sequences produced by the elements in D parabolic formation in the $PS[x + 2, x, x]$

2.1 The D-Destroyer parabolas with offset Zero in $PS[x + 2, x, x]$

See the picture:

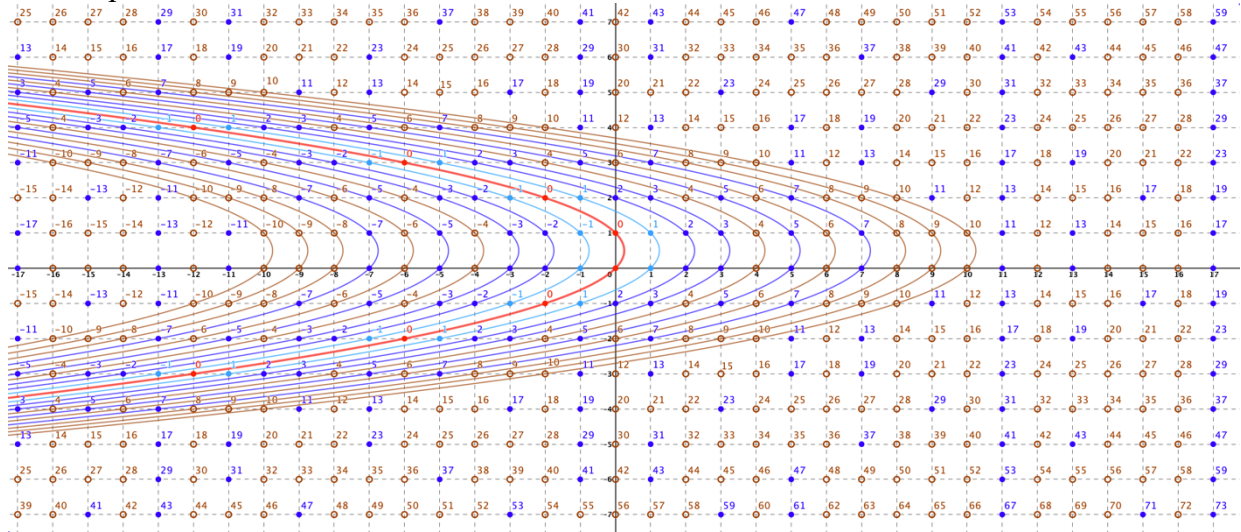


Figure 1. The D-Destroyer parabolas of the form $x = -y^2 + y + c$ for $-10 \leq c \leq 10$ with offset $f = 0$ in lattice-grid $PS[x + 2, x, x]$. They produce the paraboctys $PS[x, x, x]$.

Thus, the D-Destroyer parabolas of the form $x = -y^2 + y + c$ for $-10 \leq c \leq 10$ with offset $f = 0$ in lattice-grid $PS[x + 2, x, x]$ produce paraboctys with coefficient $a = 0$. The coefficient b will depend on the offset and vice-versa. Each D-Destroyer parabola with offset $f = 0$ has sequence $Y[y]$ only the constant value of its coefficient c .

Column-->	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
b	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
15	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
14	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
13	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
12	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
10	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
9	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
8	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
7	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
6	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
5	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
4	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
3	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
2	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
Y[1]	1	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Y[0]	0	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Y[-1]	-1	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
-2	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-3	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-4	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-5	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-6	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-7	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-8	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-9	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-10	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-12	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-13	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-14	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-15	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	

Figure 1. Paraboctys $PS[x, x, x]$. Initial vertical lines to form any specific paraboctys.

Thus, we can imagine the construction of the $PS[x + 2, x, x]$ starting from infinite vertical lines, each vertical with a constant value according to the table above.

Then, we mold these vertical lines according to the D-Destroyer parabolas of the form $x = -y^2 + y + c$, where $Y[y] = c$ with offset Zero.

This procedure produces the specific paraboctys $PS[x + 2, x, x]$:

Column -->	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
x_ip	-9,8	-8,8	-7,8	-6,8	-5,8	-4,8	-3,8	-2,8	-1,8	-0,8	-0,3	0,75	1,75	2,75	3,75	4,75	5,75	6,75	7,75	8,75	9,75	
x_focus	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
LR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Δ	-39	-35	-31	-27	-23	-19	-15	-11	-7	-3	1	-3	-7	-11	-15	-19	-23	-27	-31	-35	-39	
√Δ	###	###	###	###	###	###	###	###	###	###	1	###	###	###	###	###	###	###	###	###	###	
C. G.	###	###	###	###	###	###	###	###	###	###	0	###	###	###	###	###	###	###	###	###	###	
Root1	###	###	###	###	###	###	###	###	###	###	1	###	###	###	###	###	###	###	###	###	###	
Root2	###	###	###	###	###	###	###	###	###	###	0	###	###	###	###	###	###	###	###	###	###	
Root2-Root1	###	###	###	###	###	###	###	###	###	###	-1	###	###	###	###	###	###	###	###	###	###	
Classif.	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	
y_ip	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	
f	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
a	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	1	1	1	1	1	1	1	1	1	1	1	
b	1	1	1	1	1	1	1	1	1	1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
c	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
15	-220	-219	-218	-217	-216	-215	-214	-213	-212	-211	210	211	212	213	214	215	216	217	218	219	220	
14	-192	-191	-190	-189	-188	-187	-186	-185	-184	-183	182	183	184	185	186	187	188	189	190	191	192	
13	-166	-165	-164	-163	-162	-161	-160	-159	-158	-157	156	157	158	159	160	161	162	163	164	165	166	
12	-142	-141	-140	-139	-138	-137	-136	-135	-134	-133	132	133	134	135	136	137	138	139	140	141	142	
11	-120	-119	-118	-117	-116	-115	-114	-113	-112	-111	110	111	112	113	114	115	116	117	118	119	120	
10	-100	-99	-98	-97	-96	-95	-94	-93	-92	-91	90	91	92	93	94	95	96	97	98	99	100	
9	-82	-81	-80	-79	-78	-77	-76	-75	-74	-73	72	73	74	75	76	77	78	79	80	81	82	
8	-66	-65	-64	-63	-62	-61	-60	-59	-58	-57	56	57	58	59	60	61	62	63	64	65	66	
7	-52	-51	-50	-49	-48	-47	-46	-45	-44	-43	42	43	44	45	46	47	48	49	50	51	52	
6	-40	-39	-38	-37	-36	-35	-34	-33	-32	-31	30	31	32	33	34	35	36	37	38	39	40	
5	-30	-29	-28	-27	-26	-25	-24	-23	-22	-21	20	21	22	23	24	25	26	27	28	29	30	
4	-22	-21	-20	-19	-18	-17	-16	-15	-14	-13	12	13	14	15	16	17	18	19	20	21	22	
3	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	6	7	8	9	10	11	12	13	14	15	16	
2	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	2	3	4	5	6	7	8	9	10	11	12	
Y[1]	0	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Y[0]	0	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Y[-1]	-1	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	2	3	4	5	6	7	8	9	10	11	12
-2	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	6	7	8	9	10	11	12	13	14	15	16	
-3	-22	-21	-20	-19	-18	-17	-16	-15	-14	-13	12	13	14	15	16	17	18	19	20	21	22	
-4	-30	-29	-28	-27	-26	-25	-24	-23	-22	-21	20	21	22	23	24	25	26	27	28	29	30	
-5	-40	-39	-38	-37	-36	-35	-34	-33	-32	-31	30	31	32	33	34	35	36	37	38	39	40	
-6	-52	-51	-50	-49	-48	-47	-46	-45	-44	-43	42	43	44	45	46	47	48	49	50	51	52	
-7	-66	-65	-64	-63	-62	-61	-60	-59	-58	-57	56	57	58	59	60	61	62	63	64	65	66	
-8	-82	-81	-80	-79	-78	-77	-76	-75	-74	-73	72	73	74	75	76	77	78	79	80	81	82	
-9	-100	-99	-98	-97	-96	-95	-94	-93	-92	-91	90	91	92	93	94	95	96	97	98	99	100	
-10	-120	-119	-118	-117	-116	-115	-114	-113	-112	-111	110	111	112	113	114	115	116	117	118	119	120	
-11	-142	-141	-140	-139	-138	-137	-136	-135	-134	-133	132	133	134	135	136	137	138	139	140	141	142	
-12	-166	-165	-164	-163	-162	-161	-160	-159	-158	-157	156	157	158	159	160	161	162	163	164	165	166	
-13	-192	-191	-190	-189	-188	-187	-186	-185	-184	-183	182	183	184	185	186	187	188	189	190	191	192	
-14	-220	-219	-218	-217	-216	-215	-214	-213	-212	-211	210	211	212	213	214	215	216	217	218	219	220	
-15	-250	-249	-248	-247	-246	-245	-244	-243	-242	-241	240	241	242	243	244	245	246	247	248	249	250	

Figure 1. The specific paraboctys $PS[x + 2, x, x]$ in table format. The central column is the Oblong numbers sequence $A002378 \equiv [2,0,0] \equiv Y[y] = y^2 - y$. Only lines $Y[0]$ and $Y[1]$ remain unshifted from $PS[x, x, x]$ to $PS[x + 2, x, x]$.

2.2 The D-Destroyer parabolas with variable offset on a vertical of $PS[x + 2, x, x]$

See the picture:

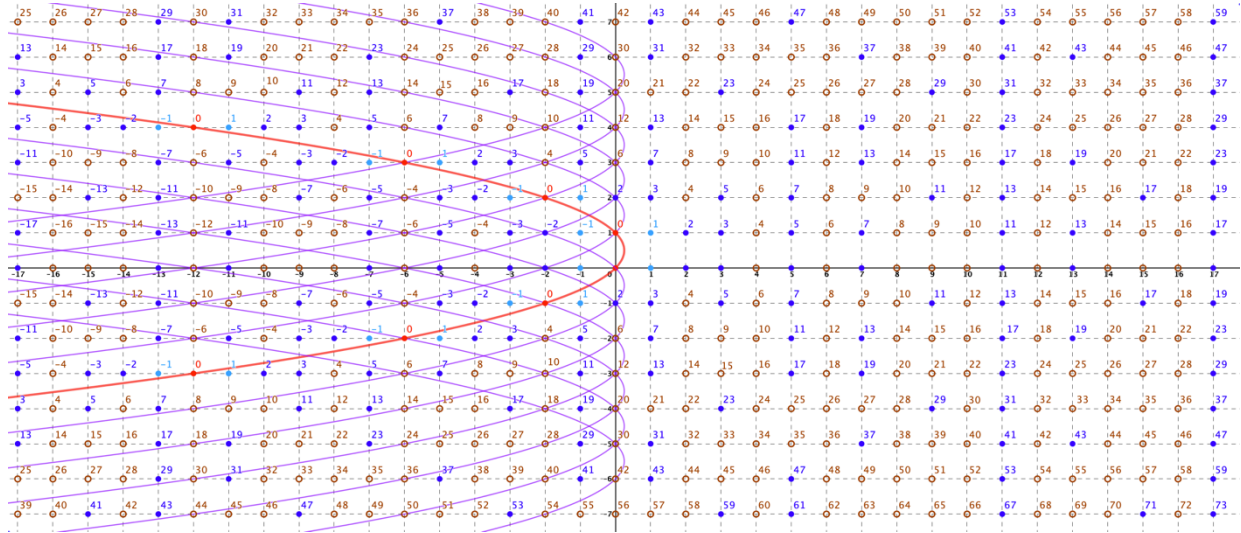


Figure 1. The D-Destroyer parabolas in column $x = 0$ of the lattice-grid $PS[x + 2, x, x]$. They have offset following the staircase function with the step of a unit. These parabolas have equations in the XY plane of the form $x = -y^2 + Odd * y - Oblong$. In terms of the offset value: $x = -y^2 + (2f + 1)y - (f^2 + f)$.

Each parabola $x = -y^2 + (2f + 1)y - (f^2 + f)$ in lattice-grid $PS[x + 2, x, x]$ will produce a quadratic sequence of the form $Y[y] = ay^2 + by + c$. Now, to determine the coefficients a, b, c , for each sequence we have to determine three consecutive elements.

Over each parabola, we can choose 3 consecutive elements from top to bottom or from bottom to top. Because we are synchronizing the y index with the Y-axis, we will choose 3 consecutive bottom-up elements which is the increasing index direction: $[Y[-1], Y[0], Y[1]]$.

The elements of row $y = -1$ in the new paraboctys will be noted as $@Y[-1]$.

The elements of row $y = 0$ in the new paraboctys will be noted as $@Y[0]$.

The elements of row $y = 1$ in the new paraboctys will be noted as $@Y[1]$.

So, let's create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]]$. This new paraboctys will contain all the sequences formed by the D-Destroyer parabolas with a variable offset in a vertical of lattice-grid $PS[x + 2, x, x]$.

As we have D-Destroyer parabolas, we can understand each sequence as being made of one element of the vertical column $x = -2$ to assume the $@Y[-1]$ elements position and two elements of the vertical column $x = 0$ to assume the $@Y[0]$ and $@Y[1]$ elements positions.

Consequently,

1. The elements on the vertical column $x = -2$ with offset $f = -1$ of the current paraboctys $PS[x + 2, x, x]$ is:

$$A028552 \equiv [-2, -2, 0] \equiv @Y[-1] = x^2 + x - 2$$

2. The elements on the vertical column $x = 0$ with offset $f = 0$ of the current paraboctys $PS[x + 2, x, x]$ is:

$$A002378 \equiv [2, 0, 0] \equiv @Y[0] = x^2 - x$$

3. The elements on the vertical column $x = 0$ with offset $f = 1$ of the current paraboctys $PS[x + 2, x, x]$ is:

$$A002378 \equiv [6, 2, 0] \equiv @Y[1] = x^2 - 3x + 2$$

Finally, we create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]] = PS[x^2 + x - 2, x^2 - x, x^2 - 3x + 2]$:

Column-->	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
b	32	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0	-2	-4	-6	-8	-10	-12	-14	-16	-18	-20	-22	-24	-26	-28	
c	240	210	182	156	132	110	90	72	56	42	30	20	12	6	2	0	0	2	6	12	20	30	42	56	72	90	110	132	156	182	210	
15	720	660	602	546	492	440	390	342	296	252	210	170	132	96	62	30	0	-28	-54	-78	-100	-120	-138	-154	-168	-180	-190	-198	-204	-208	-210	
14	688	630	574	520	468	418	370	324	280	238	198	160	124	90	58	28	0	-26	-50	-72	-92	-110	-126	-140	-152	-162	-170	-176	-180	-182	-182	
13	656	600	546	494	444	396	350	306	264	224	186	150	116	84	54	26	0	-24	-46	-66	-84	-100	-114	-126	-136	-144	-150	-154	-156	-156	-154	
12	624	570	518	468	420	374	330	288	248	210	174	140	108	78	50	24	0	-22	-42	-60	-76	-90	-102	-112	-120	-126	-130	-132	-132	-130	-126	
11	592	540	490	442	396	352	310	270	232	196	162	130	100	72	46	22	0	-20	-38	-54	-68	-80	-90	-98	-104	-108	-110	-110	-108	-104	-98	
10	560	510	462	416	372	330	290	252	216	182	150	120	92	66	42	20	0	-18	-34	-48	-60	-70	-78	-84	-88	-90	-90	-88	-84	-78	-70	
9	528	480	434	390	348	308	270	234	200	168	138	110	84	60	38	18	0	-16	-30	-42	-52	-60	-66	-70	-72	-72	-70	-66	-60	-52	-42	
8	496	450	406	364	324	286	250	216	184	154	126	100	76	54	34	16	0	-14	-26	-36	-44	-50	-54	-56	-56	-54	-50	-44	-36	-26	-14	
7	464	420	378	338	300	264	230	198	168	140	114	90	68	48	30	14	0	-12	-22	-30	-36	-40	-42	-42	-40	-36	-30	-22	-12	0	14	
6	432	390	350	312	276	242	210	180	152	126	102	80	60	42	26	12	0	-10	-18	-24	-28	-30	-30	-28	-24	-18	-10	0	12	26	42	
5	400	360	322	286	252	220	190	162	136	112	90	70	52	36	22	10	0	-8	-14	-18	-20	-20	-18	-14	-8	0	10	22	36	52	70	
4	368	330	294	260	228	198	170	144	120	98	78	60	44	30	18	8	0	-6	-10	-12	-12	-10	-6	0	8	18	30	44	60	78	98	
3	336	300	266	234	204	176	150	126	104	84	66	50	36	24	14	6	0	-4	-6	-6	-4	0	6	14	24	36	50	66	84	104	126	
2	304	270	238	208	180	154	130	108	88	70	54	40	28	18	10	4	0	-2	-2	0	4	10	18	28	40	54	70	88	108	130	154	
Y[1]	1	272	240	210	182	156	132	110	90	72	56	42	30	20	12	6	2	0	0	2	6	12	20	30	42	56	72	90	110	132	156	182
Y[0]	0	240	210	182	156	132	110	90	72	56	42	30	20	12	6	2	0	0	2	6	12	20	30	42	56	72	90	110	132	156	182	210
Y[-1]	-1	208	180	154	130	108	88	70	54	40	28	18	10	4	0	-2	-2	0	4	10	18	28	40	54	70	88	108	130	154	180	208	238
-2	176	150	126	104	84	66	50	36	24	14	6	0	-4	-6	-6	0	6	14	24	36	50	66	84	104	126	150	176	204	234	266		
-3	144	120	98	78	60	44	30	18	8	0	-6	-10	-12	-12	-10	-6	0	8	18	30	44	60	78	98	120	144	170	198	228	260	294	
-4	112	90	70	52	36	22	10	0	-8	-14	-18	-20	-20	-18	-14	-8	0	10	22	36	52	70	90	112	136	162	190	220	252	286	322	
-5	80	60	42	26	12	0	-10	-18	-24	-28	-30	-30	-28	-24	-18	-10	0	12	26	42	60	80	102	126	152	180	210	242	276	312	350	
-6	48	30	14	0	-12	-22	-30	-36	-40	-42	-42	-40	-36	-30	-22	-12	0	14	30	48	68	90	114	140	168	198	230	264	300	338	378	
-7	16	0	-14	-26	-36	-44	-50	-54	-56	-56	-54	-50	-44	-36	-26	-14	0	16	34	54	76	100	126	154	184	216	250	286	324	364	406	
-8	-16	-30	-42	-52	-60	-66	-70	-72	-72	-70	-66	-60	-52	-42	-30	-16	0	18	38	60	84	110	138	168	200	234	270	308	348	390	434	
-9	-48	-60	-70	-78	-84	-88	-90	-90	-88	-84	-78	-70	-60	-48	-34	-18	0	20	42	66	92	120	150	182	216	252	290	330	372	416	462	
-10	-80	-90	-98	-104	-108	-110	-110	-108	-104	-98	-90	-80	-68	-54	-38	-20	0	22	46	72	100	130	162	196	232	270	310	352	396	442	490	
-11	-112	-120	-126	-130	-132	-132	-130	-126	-120	-112	-102	-90	-76	-60	-42	-22	0	24	50	78	108	140	174	210	248	288	330	374	420	468	518	
-12	-144	-150	-154	-156	-156	-154	-150	-144	-136	-126	-114	-100	-84	-66	-46	-24	0	26	54	84	116	150	186	224	264	306	350	396	444	494	546	
-13	-176	-180	-182	-182	-180	-176	-170	-162	-152	-140	-126	-110	-92	-72	-50	-26	0	28	58	90	124	160	198	238	280	324	370	418	468	520	574	
-14	-208	-210	-210	-208	-204	-198	-190	-180	-168	-154	-138	-120	-100	-78	-54	-28	0	30	62	96	132	170	210	252	296	342	390	440	492	546	602	
-15	-240	-240	-238	-234	-228	-220	-210	-198	-184	-168	-150	-130	-108	-84	-58	-30	0	32	66	102	140	180	222	266	312	360	410	462	516	572	630	

Figure 1. Paraboctys $PS[x^2 + x - 2, x^2 - x, x^2 - 3x + 2]$. The verticals represent the sequences produced by D-Destroyer parabolas with variable offset on the vertical $x = 0$ of the $PS[x + 2, x, x]$.

The coefficients a, b, c of the vertical quadratic equations of the $PS[x^2 + x - 2, x^2 - x, x^2 - 3x + 2]$ are calculated using our general equation:

$$\begin{aligned}
 &PS[x^2 + x - 2, x^2 - x, x^2 - 3x + 2] \\
 &= \left(\frac{@Y[-1] - 2@Y[0] + @Y[1]}{2} \right) y^2 + \left(\frac{@Y[1] - @Y[-1]}{2} \right) y + @Y[0] \\
 &PS[x^2 + x - 2, x^2 - x, x^2 - 3x + 2] \\
 &= \left(\frac{(x^2 + x - 2) - 2(x^2 - x) + (x^2 - 3x + 2)}{2} \right) y^2 \\
 &+ \left(\frac{(x^2 - 3x + 2) - (x^2 + x - 2)}{2} \right) y + (x^2 - x) \\
 &PS[x^2 + x - 2, x^2 - x, x^2 - 3x + 2] = (0)y^2 + (-2x + 2)y + (x^2 - x)
 \end{aligned}$$

Due to the equations of the formation sequences of this paraboctys, the vertical of the zeros is produced in column 1 and not in column 0.

The D-Destroyer parabolas with positive offset produce the vertical sequences on the left side of this table. The D-Destroyer parabolas with negative offset produce the vertical sequences on the right side of this table.

If we turn the paraboctys $PS[x^2 + x - 2, x^2 - x, x^2 - 3x + 2]$ clockwise 90° around the central point $(0,0)$, we get:

Column-->	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Classif.	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	
y_jp	-14.5	-13.5	-12.5	-11.5	-10.5	-9.5	-8.5	-7.5	-6.5	-5.5	-4.5	-3.5	-2.5	-1.5	-0.5	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	13.5	14.5	15.5	
f	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
a	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
b	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	-1	-3	-5	-7	-9	-11	-13	-15	-17	-19	-21	-23	-25	-27	-29	-31	
c	-30	-28	-26	-24	-22	-20	-18	-16	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	
-15	-240	-208	-176	-144	-112	-80	-48	-16	16	48	80	112	144	176	208	240	272	304	336	368	400	432	464	496	528	560	592	624	656	688	720	
-14	-240	-210	-180	-150	-120	-90	-60	-30	0	30	60	90	120	150	180	210	240	270	300	330	360	390	420	450	480	510	540	570	600	630	660	
-13	-238	-210	-182	-154	-126	-98	-70	-42	-14	14	42	70	98	126	154	182	210	238	266	294	322	350	378	406	434	462	490	518	546	574	602	
-12	-234	-208	-182	-156	-130	-104	-78	-52	-26	0	26	52	78	104	130	156	182	208	234	260	286	312	338	364	390	416	442	468	494	520	546	
-11	-228	-204	-180	-156	-132	-108	-84	-60	-36	-12	12	36	60	84	108	132	156	180	204	228	252	276	300	324	348	372	396	420	444	468	492	
-10	-220	-198	-176	-154	-132	-110	-88	-66	-44	-22	0	22	44	66	88	110	132	154	176	198	220	242	264	286	308	330	352	374	396	418	440	
-9	-210	-190	-170	-150	-130	-110	-90	-70	-50	-30	-10	10	30	50	70	90	110	130	150	170	190	210	230	250	270	290	310	330	350	370	390	
-8	-198	-180	-162	-144	-126	-108	-90	-72	-54	-36	-18	0	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270	288	306	324	342	
-7	-184	-168	-152	-136	-120	-104	-88	-72	-56	-40	-24	-8	8	24	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280	296	
-6	-168	-154	-140	-126	-112	-98	-84	-70	-56	-42	-28	-14	0	14	28	42	56	70	84	98	112	126	140	154	168	182	196	210	224	238	252	
-5	-150	-138	-126	-114	-102	-90	-78	-66	-54	-42	-30	-18	-6	6	18	30	42	54	66	78	90	102	114	126	138	150	162	174	186	198	210	
-4	-130	-120	-110	-100	-90	-80	-70	-60	-50	-40	-30	-20	-10	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	
-3	-108	-100	-92	-84	-76	-68	-60	-52	-44	-36	-28	-20	-12	-4	4	12	20	28	36	44	52	60	68	76	84	92	100	108	116	124	132	
-2	-84	-78	-72	-66	-60	-54	-48	-42	-36	-30	-24	-18	-12	-6	0	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	
-1	-58	-54	-50	-46	-42	-38	-34	-30	-26	-22	-18	-14	-10	-6	-2	2	6	10	14	18	22	26	30	34	38	42	46	50	54	58	62	
Y[0]	0	-30	-28	-26	-24	-22	-20	-18	-16	-14	-12	-10	-8	-6	-4	-2	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Y[1]	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	32	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0	-2	-4	-6	-8	-10	-12	-14	-16	-18	-20	-22	-24	-26	-28	
3	66	62	58	54	50	46	42	38	34	30	26	22	18	14	10	6	2	-2	-6	-10	-14	-18	-22	-26	-30	-34	-38	-42	-46	-50	-54	
4	102	96	90	84	78	72	66	60	54	48	42	36	30	24	18	12	6	0	-6	-12	-18	-24	-30	-36	-42	-48	-54	-60	-66	-72	-78	
5	140	132	124	116	108	100	92	84	76	68	60	52	44	36	28	20	12	4	-4	-12	-20	-28	-36	-44	-52	-60	-68	-76	-84	-92	-100	
6	180	170	160	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	0	-10	-20	-30	-40	-50	-60	-70	-80	-90	-100	-110	-120	
7	222	210	198	186	174	162	150	138	126	114	102	90	78	66	54	42	30	18	6	-6	-18	-30	-42	-54	-66	-78	-90	-102	-114	-126	-138	
8	266	252	238	224	210	196	182	168	154	140	126	112	98	84	70	56	42	28	14	0	-14	-28	-42	-56	-70	-84	-98	-112	-126	-140	-154	
9	312	296	280	264	248	232	216	200	184	168	152	136	120	104	88	72	56	40	24	8	-8	-24	-40	-56	-72	-88	-104	-120	-136	-152	-168	
10	360	342	324	306	288	270	252	234	216	198	180	162	144	126	108	90	72	54	36	18	0	-18	-36	-54	-72	-90	-108	-126	-144	-162	-180	
11	410	390	370	350	330	310	290	270	250	230	210	190	170	150	130	110	90	70	50	30	10	-10	-30	-50	-70	-90	-110	-130	-150	-170	-190	
12	462	440	418	396	374	352	330	308	286	264	242	220	198	176	154	132	110	88	66	44	22	0	-22	-44	-66	-88	-110	-132	-154	-176	-198	
13	516	492	468	444	420	396	372	348	324	300	276	252	228	204	180	156	132	108	84	60	36	12	-12	-36	-60	-84	-108	-132	-156	-180	-204	
14	572	546	520	494	468	442	416	390	364	338	312	286	260	234	208	182	156	130	104	78	52	26	0	-26	-52	-78	-104	-130	-156	-182	-208	
15	630	602	574	546	518	490	462	434	406	378	350	322	294	266	238	210	182	154	126	98	70	42	14	-14	-42	-70	-98	-126	-154	-182	-210	

Figure 1. Paraboctys $PS[4x + 2, 2x, 0]$. The vertical ones here are the horizontal ones of $PS[x^2 + x - 2, x^2 - x, x^2 - 3x + 2]$. Because of the clockwise 90° rotation the indexes y increase from top to bottom (opposite direction of the Y-axis).

Simplifying all verticals for offset $f = 0$:

2.3 The D-Submarine parabolas with variable offset on a vertical of $PS[x + 2, x, x]$

See the picture:

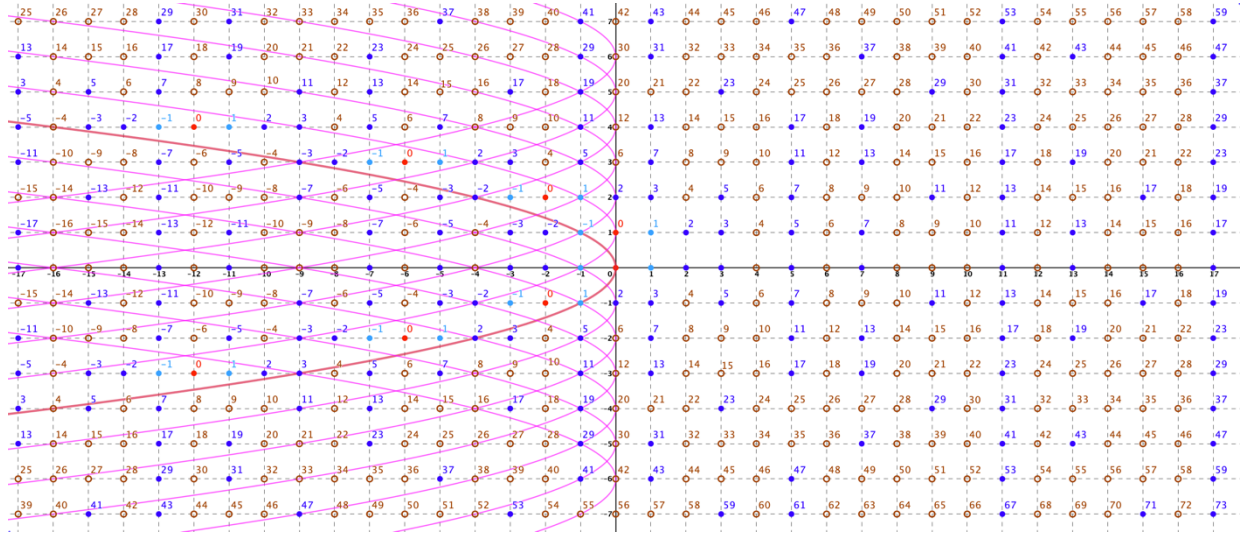


Figure 1. The D-Submarine parabolas in column $x = 0$ of the lattice-grid $PS[x + 2, x, x]$. They have offset following the staircase function with the step of a unit. These parabolas have equations in the XY plane of the form $x = -y^2 + \text{Even} * y - \text{Square}$. In terms of the offset value $x = -y^2 + 2fy - f^2$.

Each parabola $x = -y^2 + 2fy - f^2$ in lattice-grid $PS[x + 2, x, x]$ will produce a quadratic sequence of the form $Y[y] = ay^2 + by + c$. Now, to determine the coefficients a, b, c , for each sequence we have to determine three consecutive elements.

Over each parabola, we can choose 3 consecutive elements from top to bottom or from bottom to top. Because we are synchronizing the y index with the Y-axis, we will choose 3 consecutive bottom-up elements which is the increasing index direction: $[Y[-1], Y[0], Y[1]]$.

The elements of row $y = -1$ in the new paraboctys will be noted as $@Y[-1]$.

The elements of row $y = 0$ in the new paraboctys will be noted as $@Y[0]$.

The elements of row $y = 1$ in the new paraboctys will be noted as $@Y[1]$.

So, let's create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]]$. This new paraboctys will contain all the sequences formed by the D-Submarine parabolas with a variable offset in a vertical of lattice-grid $PS[x + 2, x, x]$.

As we have D-Submarine parabolas, we can understand each sequence as being made of two elements of the vertical column $x = -1$ to assume the $@Y[-1]$ and $@Y[1]$ elements position and one element of the vertical column $x = 0$ to assume the $@Y[0]$ elements positions.

If we turn the paraboctys clockwise 90° around the central point (0,0), we get:

Column -->	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Classif.	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	
y_ip	-14.5	-13.5	-12.5	-11.5	-10.5	-9.5	-8.5	-7.5	-6.5	-5.5	-4.5	-3.5	-2.5	-1.5	-0.5	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	13.5	14.5	15.5	
f	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
a	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
b	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	-1	-3	-5	-7	-9	-11	-13	-15	-17	-19	-21	-23	-25	-27	-29	-31	
c	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Y[-1]	-15	-225	-194	-163	-132	-101	-70	-39	-8	23	54	85	116	147	178	209	240	271	302	333	364	395	426	457	488	519	550	581	612	643	674	705
Y[0]	0	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Y[1]	1	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15
Y[2]	47	44	41	38	35	32	29	26	23	20	17	14	11	8	5	2	-1	-4	-7	-10	-13	-16	-19	-22	-25	-28	-31	-34	-37	-40	-43	
Y[3]	81	76	71	66	61	56	51	46	41	36	31	26	21	16	11	6	1	-4	-9	-14	-19	-24	-29	-34	-39	-44	-49	-54	-59	-64	-69	
Y[4]	117	110	103	96	89	82	75	68	61	54	47	40	33	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93	
Y[5]	155	146	137	128	119	110	101	92	83	74	65	56	47	38	29	20	11	2	-7	-16	-25	-34	-43	-52	-61	-70	-79	-88	-97	-106	-115	
Y[6]	195	184	173	162	151	140	129	118	107	96	85	74	63	52	41	30	19	8	-3	-14	-25	-36	-47	-58	-69	-80	-91	-102	-113	-124	-135	
Y[7]	237	224	211	198	185	172	159	146	133	120	107	94	81	68	55	42	29	16	3	-10	-23	-36	-49	-62	-75	-88	-101	-114	-127	-140	-153	
Y[8]	281	266	251	236	221	206	191	176	161	146	131	116	101	86	71	56	41	26	11	-4	-19	-34	-49	-64	-79	-94	-109	-124	-139	-154	-169	
Y[9]	327	310	293	276	259	242	225	208	191	174	157	140	123	106	89	72	55	38	21	4	-13	-30	-47	-64	-81	-98	-115	-132	-149	-166	-183	
Y[10]	375	356	337	318	299	280	261	242	223	204	185	166	147	128	109	90	71	52	33	14	-5	-24	-43	-62	-81	-100	-119	-138	-157	-176	-195	
Y[11]	425	404	383	362	341	320	299	278	257	236	215	194	173	152	131	110	89	68	47	26	5	-16	-37	-58	-79	-100	-121	-142	-163	-184	-205	
Y[12]	477	454	431	408	385	362	339	316	293	270	247	224	201	178	155	132	109	86	63	40	17	-6	-29	-52	-75	-98	-121	-144	-167	-190	-213	
Y[13]	531	506	481	456	431	406	381	356	331	306	281	256	231	206	181	156	131	106	81	56	31	6	-19	-44	-69	-94	-119	-144	-169	-194	-219	
Y[14]	587	560	533	506	479	452	425	398	371	344	317	290	263	236	209	182	155	128	101	74	47	20	-7	-34	-61	-88	-115	-142	-169	-196	-223	
Y[15]	645	616	587	558	529	500	471	442	413	384	355	326	297	268	239	210	181	152	123	94	65	36	7	-22	-51	-80	-109	-138	-167	-196	-225	

Figure 1. Paraboctys $PS[3x + 2, x, -x]$. The vertical ones here are the horizontal ones of $PS[x^2 + x - 1, x^2 - x, x^2 - 3x + 1]$. Because of the clockwise 90° rotation the indexes y increase from top to bottom (opposite direction of the Y -axis).

Simplifying all verticals for offset $f = 0$:

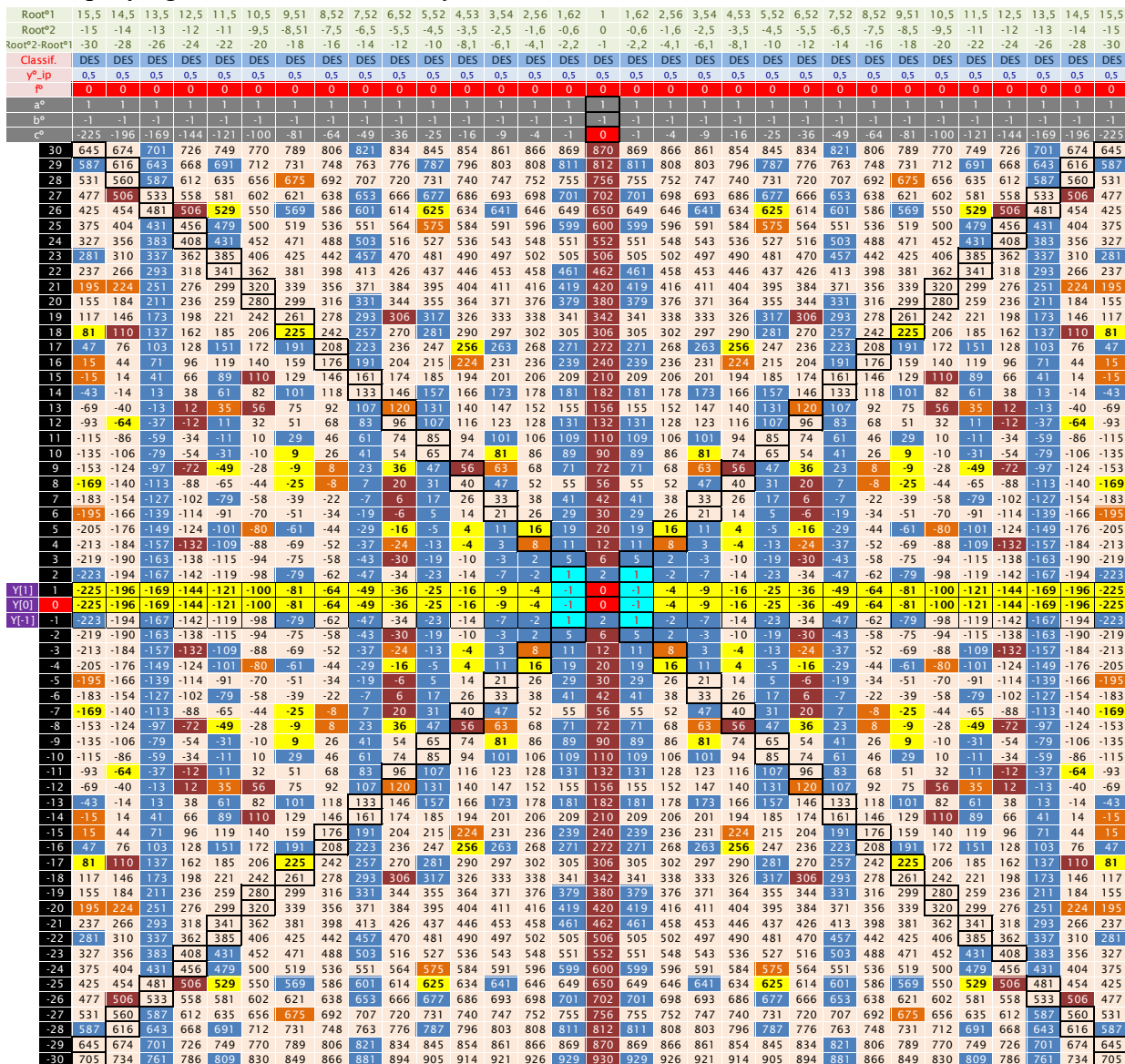


Figure 1. Paraboctys $PS[-x^2 + 2, -x^2, -x^2]$. All verticals of Paraboctys $PS[3x + 2, x, -x]$ in offset $f = 0$.

See these 5 sequences of prime numbers on $PS[-x^2 + 2, -x^2, -x^2]$:

$$AXXXXXX \equiv Y[y] = y^2 - y - 2^2$$

$$AXXXXXX \equiv Y[y] = y^2 - y - 3^2$$

$$AXXXXXX \equiv Y[y] = y^2 - y - 5^2$$

$$AXXXXXX \equiv Y[y] = y^2 - y - 7^2$$

$$A212325 \equiv Y[y] = y^2 - y - 13^2$$

See the similarity between these sequences and the sequences shown in A014556 Euler's "Lucky" numbers. In both cases, all the vertical sequences have the same reason for the limit of prime numbers in the sequences. The two zero elements generate two streams of composites in diagonals $\pm 45^\circ$.

Here the sequence next to the A002378 Oblong numbers is A165900 Values of Fibonacci polynomial $Y[y] = y^2 - y - 1^2$. At A014556 Euler's "Lucky" numbers the sequence next to the A002378 Oblong numbers is A002061 Central polygonal numbers: $Y[y] = y^2 - y + 1$.

See that all prime number sequences in zero offset start with two primes squared elements and all ends at the composite generator $Y[y] = 3y^2 \pm 2y$. This composite generator has two classifications in the OEIS:

- A000567 Octagonal numbers: $n*(3*n-2)$. Also called star numbers.
- A045944 Rhombic matchstick numbers: $a(n) = n*(3*n+2)$.

y	3y	3y-1	3y-2	Produit	Sum	A000567	y	3y	3y+1	3y+2	Produit	Sum	A045944
10	30	29	28	24360	87	280	10	30	31	32	29760	93	320
9	27	26	25	17550	78	225	9	27	28	29	21924	84	261
8	24	23	22	12144	69	176	8	24	25	26	15600	75	208
7	21	20	19	7980	60	133	7	21	22	23	10626	66	161
6	18	17	16	4896	51	96	6	18	19	20	6840	57	120
5	15	14	13	2730	42	65	5	15	16	17	4080	48	85
4	12	11	10	1320	33	40	4	12	13	14	2184	39	56
3	9	8	7	504	24	21	3	9	10	11	990	30	33
2	6	5	4	120	15	8	2	6	7	8	336	21	16
1	3	2	1	6	6	1	1	3	4	5	60	12	5
0	0	-1	-2	0	-3	0	0	0	1	2	0	3	0
-1	-3	-4	-5	-60	-12	5	-1	-3	-2	-1	-6	-6	1
-2	-6	-7	-8	-336	-21	16	-2	-6	-5	-4	-120	-15	8
-3	-9	-10	-11	-990	-30	33	-3	-9	-8	-7	-504	-24	21
-4	-12	-13	-14	-2184	-39	56	-4	-12	-11	-10	-1320	-33	40
-5	-15	-16	-17	-4080	-48	85	-5	-15	-14	-13	-2730	-42	65
-6	-18	-19	-20	-6840	-57	120	-6	-18	-17	-16	-4896	-51	96
-7	-21	-22	-23	-10626	-66	161	-7	-21	-20	-19	-7980	-60	133
-8	-24	-25	-26	-15600	-75	208	-8	-24	-23	-22	-12144	-69	176
-9	-27	-28	-29	-21924	-84	261	-9	-27	-26	-25	-17550	-78	225
-10	-30	-31	-32	-29760	-93	320	-10	-30	-29	-28	-24360	-87	280

Figure 1. A000567 and A045944 are the same composite generator $Y[y] = 3y^2 \pm 2y$ which is the product of 3 consecutive integers divided by the sum of them.

$$\begin{aligned}
 Y[y] &= \frac{3y(3y-1)(3y-2)}{3y+(3y-1)+(3y-2)} = \frac{3y(9y^2-9y+2)}{9y-3} = \frac{9y^3-9y^2+2y}{3y-1} \\
 &= \frac{(3y^2-2y)(3y-1)}{3y-1} = 3y^2-2y \\
 Y[y] &= \frac{3y(3y+1)(3y+2)}{3y+(3y+1)+(3y+2)} = \frac{3y(9y^2+9y+2)}{9y+3} = \frac{9y^3+9y^2+2y}{3y+1} \\
 &= \frac{(3y^2+2y)(3y+1)}{3y+1} = 3y^2+2y
 \end{aligned}$$

New sequences of primes we find when adding Integers. For example, adding 6, turn the paraboclyts clockwise 90°, and we have on offset $f = 0$:

Column-->	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Classif.	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	
γ_{ip}	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
ρ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
a°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
b°	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
c°	-219	-190	-163	-138	-115	-94	-75	-58	-43	-30	-19	-10	-3	2	5	6	5	2	-3	-10	-19	-30	-43	-58	-75	-94	-115	-138	-163	-190	-219	
15	-9	20	47	72	95	116	135	152	167	180	191	200	207	212	215	216	215	212	207	200	191	180	167	152	135	116	95	72	47	20	-9	
14	-37	-8	19	44	67	88	107	124	139	152	163	172	179	184	187	188	187	184	179	172	163	152	139	124	107	88	67	44	19	-8	-37	
13	-63	-34	-7	18	41	62	81	98	113	126	137	146	153	158	161	162	161	158	153	146	137	126	113	98	81	62	41	18	-7	-34	-63	
12	-87	-58	-31	-6	17	38	57	74	89	102	113	122	129	134	137	138	137	134	129	122	113	102	89	74	57	38	17	-6	-31	-58	-87	
11	-109	-80	-53	-28	-5	16	35	52	67	80	91	100	107	112	115	116	115	112	107	100	91	80	67	52	35	16	-5	-28	-53	-80	-109	
10	-129	-100	-73	-48	-25	-4	15	32	47	60	71	80	87	92	95	96	95	92	87	80	71	60	47	32	15	-4	-25	-48	-73	-100	-129	
9	-147	-118	-91	-66	-43	-22	-3	14	29	42	53	62	69	74	77	78	77	74	69	62	53	42	29	14	-3	-22	-43	-66	-91	-118	-147	
8	-163	-134	-107	-82	-59	-38	-19	-2	13	26	37	46	53	58	61	62	61	58	53	46	37	26	13	-2	-19	-38	-59	-82	-107	-134	-163	
7	-177	-148	-121	-96	-73	-52	-33	-16	-1	12	23	32	39	44	47	48	47	44	39	32	23	12	-1	-16	-33	-52	-73	-96	-121	-148	-177	
6	-189	-160	-133	-108	-85	-64	-45	-28	-15	0	11	20	27	32	35	36	35	32	27	20	11	0	-15	-28	-45	-64	-85	-108	-133	-160	-189	
5	-199	-170	-143	-118	-95	-74	-55	-38	-23	-10	1	10	17	22	25	26	25	22	17	10	1	-10	-23	-38	-55	-74	-95	-118	-143	-170	-199	
4	-207	-178	-151	-126	-103	-82	-63	-46	-31	-18	-7	2	9	14	17	18	17	14	9	2	-7	-18	-31	-46	-63	-82	-103	-126	-151	-178	-207	
3	-213	-184	-157	-132	-109	-88	-69	-52	-37	-24	-13	-4	3	8	11	12	11	8	3	-4	-13	-24	-37	-52	-69	-88	-109	-132	-157	-184	-213	
2	-217	-188	-161	-136	-113	-92	-73	-56	-41	-28	-17	-8	-1	4	7	8	7	4	-1	-8	-17	-28	-41	-56	-73	-92	-113	-136	-161	-188	-217	
Y[1]	1	-219	-190	-163	-138	-115	-94	-75	-58	-43	-30	-19	-10	-3	2	5	6	5	2	-3	-10	-19	-30	-43	-58	-75	-94	-115	-138	-163	-190	-219
Y[0]	0	-219	-190	-163	-138	-115	-94	-75	-58	-43	-30	-19	-10	-3	2	5	6	5	2	-3	-10	-19	-30	-43	-58	-75	-94	-115	-138	-163	-190	-219
Y[-1]	-1	-217	-188	-161	-136	-113	-92	-73	-56	-41	-28	-17	-8	-1	4	7	8	7	4	-1	-8	-17	-28	-41	-56	-73	-92	-113	-136	-161	-188	-217
-2	-213	-184	-157	-132	-109	-88	-69	-52	-37	-24	-13	-4	3	8	11	12	11	8	3	-4	-13	-24	-37	-52	-69	-88	-109	-132	-157	-184	-213	
-3	-207	-178	-151	-126	-103	-82	-63	-46	-31	-18	-7	2	9	14	17	18	17	14	9	2	-7	-18	-31	-46	-63	-82	-103	-126	-151	-178	-207	
-4	-199	-170	-143	-118	-95	-74	-55	-38	-23	-10	1	10	17	22	25	26	25	22	17	10	1	-10	-23	-38	-55	-74	-95	-118	-143	-170	-199	
-5	-189	-160	-133	-108	-85	-64	-45	-28	-15	0	11	20	27	32	35	36	35	32	27	20	11	0	-15	-28	-45	-64	-85	-108	-133	-160	-189	
-6	-177	-148	-121	-96	-73	-52	-33	-16	-1	12	23	32	39	44	47	48	47	44	39	32	23	12	-1	-16	-33	-52	-73	-96	-121	-148	-177	
-7	-163	-134	-107	-82	-59	-38	-19	-2	13	26	37	46	53	58	61	62	61	58	53	46	37	26	13	-2	-19	-38	-59	-82	-107	-134	-163	
-8	-147	-118	-91	-66	-43	-22	-3	14	29	42	53	62	69	74	77	78	77	74	69	62	53	42	29	14	-3	-22	-43	-66	-91	-118	-147	
-9	-129	-100	-73	-48	-25	-4	15	32	47	60	71	80	87	92	95	96	95	92	87	80	71	60	47	32	15	-4	-25	-48	-73	-100	-129	
-10	-109	-80	-53	-28	-5	16	35	52	67	80	91	100	107	112	115	116	115	112	107	100	91	80	67	52	35	16	-5	-28	-53	-80	-109	
-11	-87	-58	-31	-6	17	38	57	74	89	102	113	122	129	134	137	138	137	134	129	122	113	102	89	74	57	38	17	-6	-31	-58	-87	
-12	-63	-34	-7	18	41	62	81	98	113	126	137	146	153	158	161	162	161	158	153	146	137	126	113	98	81	62	41	18	-7	-34	-63	
-13	-37	-8	19	44	67	88	107	124	139	152	163	172	179	184	187	188	187	184	179	172	163	152	139	124	107	88	67	44	19	-8	-37	
-14	-9	20	47	72	95	116	135	152	167	180	191	200	207	212	215	216	215	212	207	200	191	180	167	152	135	116	95	72	47	20	-9	
-15	21	50	77	102	125	146	165	182	197	210	221	230	237	242	245	246	245	242	237	230	221	210	197	182	165	146	125	102	77	50	21	

Figure 1. $PS[-x^2 + 8, -x^2 + 6, -x^2 + 6]$

2.4 The D-Destroyer and D-Submarine interleaving parabolas with a varying offset in $PS[x + 2, x, x]$

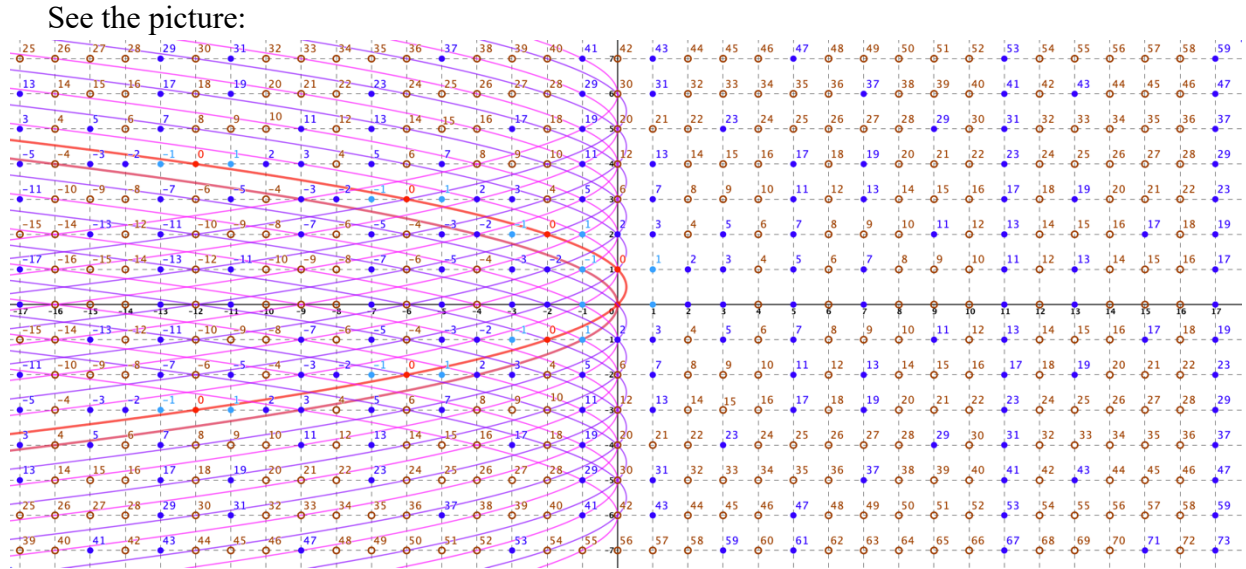


Figure 1. The combined D-Destroyers and D-Submarines vertical parabolas in column $x = 0$ of the lattice-grid $PS[x + 2, x, x]$. They have offset following the staircase function with the step of a unit.

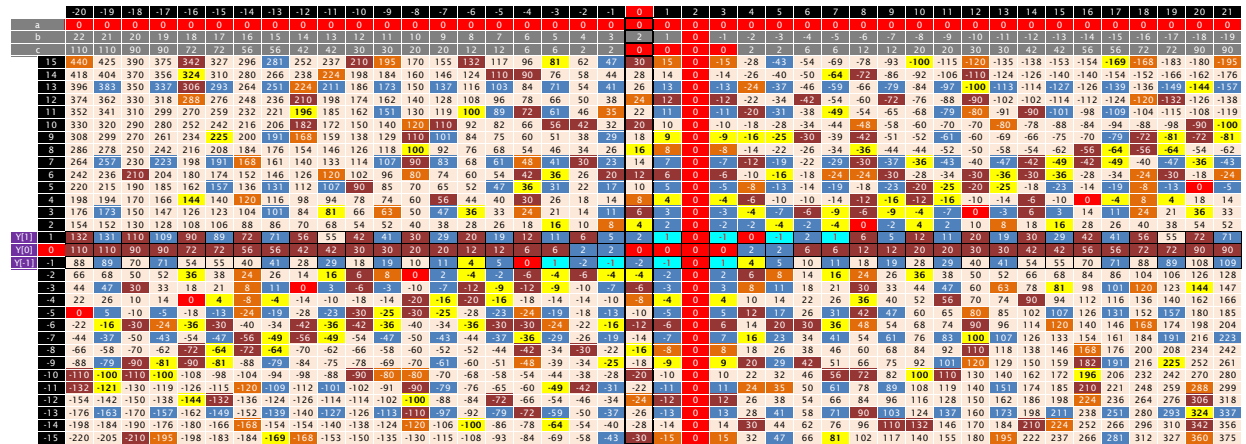


Figure 1. The combined D-Destroyers and D-Submarines parabolas in table $PS[x + 2, x, x]$.

		CENTER					
		Even	Odd	Even	Odd	Even	Odd
Y[1]	1	6	5	2	1	0	-1
Y[0]	0	2	2	0	0	0	0
Y[-1]	-1	-2	-1	-2	-1	0	1

Figure 1. The center of the combined D-Destroyers and D-Submarines parabolas in table $PS[x + 2, x, x]$.

2.4.1 The row $Y[-1] = X_1[x]$

The center of the row $Y[-1] \equiv \{\dots, -2, -1, -2, -1, 0, 1, \dots\}$.

The row $Y[-1]$ is the result of the interlacing between two quadratics:

$$Y[-1] = X_1[x = \text{even}] + X_1[x = \text{Odd}]$$

$X_1[x = \text{Even}]$ is based on sequence $[-2, -2, 0] = n^2 + n - 2 \equiv A028552 \equiv n(n \pm 3)$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_1[x = \text{Even}] \equiv A00208050502 \equiv [-2, 0, -2, 0, 0] \equiv \left(\frac{x}{2}\right)^2 + \frac{x}{2} - 2 = \frac{x^2 + 2x - 8}{4}$$

$$= 0.25x^2 + 0.5x - 2 \equiv \frac{A028560}{4} \equiv [-2, -2.25, -2] = \frac{x^2 - 3^2}{2^2} @f = 0$$

AXXXXXX

$$\equiv \{\dots, 0, 54, 0, 40, 0, 28, 0, 18, 0, 10, 0, 4, 0, 0, 0, -2, 0, -2, 0, 0, 4, 0, 10, 0, 18, 0, 28, 0, 40, 0, \dots\}$$

and

$X_1[x = \text{Odd}]$ is based on sequence $[-1, -1, 1] = n^2 + n - 1 \equiv A165900$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_1[x = \text{Odd}] \equiv A01060509000 \equiv [-1, 0, -1, 0, 1, 0] = \left(\frac{x + 1}{2}\right)^2 + \frac{x + 1}{2} - 1$$

$$= \frac{x^2 + 2x + 1 + 2x + 2 - 4}{4} = \frac{x^2 + 4x - 1}{4} = 0.25x^2 + x - 0.25$$

$$\equiv \frac{A028875}{4} \equiv [-1, -1.25, -1] = \frac{x^2 - (\sqrt{5})^2}{2^2} @f = 0$$

AXXXXXX

$$\equiv \{\dots, 71, 0, 55, 0, 41, 0, 29, 0, 19, 0, 11, 0, 5, 0, 1, 0, -1, 0, -1, 0, 1, 0, 5, 0, 11, 0, 19, 0, 29, 0, 41, \dots\}$$

$$X_1[-x = \text{Even}] = \frac{x^2 + 2x - 8}{4} \equiv \frac{A028560}{4}$$

$$X_1[-x = \text{Odd}] = \frac{x^2 + 4x - 1}{4} \equiv \frac{A028875}{4}$$

$$X_1[-x] = X_1[-x = \text{even}] + X_1[-x = \text{Odd}]$$

$$X_1[-x] = \frac{x^2 + (3x - x(-1)^x) - (4.5 + 3.5(-1)^x)}{4}$$

$$X_1[-x] = \frac{x^2 + 3x - 4.5 - (x + 3.5)(-1)^x}{4}$$

$$X_1[-x] = \frac{2x^2 + 6x - 9 - (2x + 7)(-1)^x}{8}$$

Process table to produce the row Y[-1]							
Classif.	DES	SUB		DES	SUB		
y_ip	-0,5	-1		-0,5	-2		X1 =
f	-1	-1		-1	-2		X1[Even]
	A028552	X1[Even]	X1[Even]	A165900	X1[Odd]	X1[Odd]	+ X1[Odd]
a	1	0,25		1	0,25		
b	1	0,5		1	1		
c	-2	-2	AXXXXXX	-1	-0,25	AXXXXXX	A217571
15	238	61,75	0	239	71	71	71
14	208	54	54	209	62,75	0	54
13	180	46,75	0	181	55	55	55
12	154	40	40	155	47,75	0	40
11	130	33,75	0	131	41	41	41
10	108	28	28	109	34,75	0	28
9	88	22,75	0	89	29	29	29
8	70	18	18	71	23,75	0	18
7	54	13,75	0	55	19	19	19
6	40	10	10	41	14,75	0	10
5	28	6,75	0	29	11	11	11
4	18	4	4	19	7,75	0	4
3	10	1,75	0	11	5	5	5
2	4	0	0	5	2,75	0	0
Y[1]	1	0	-1,25	1	1	1	1
Y[0]	0	-2	-2	-1	-0,25	0	-2
Y[-1]	-1	-2	-2,25	-1	-1	-1	-1
-2	0	-2	-2	1	-1,25	0	-2
-3	4	-1,25	0	5	-1	-1	-1
-4	10	0	0	11	-0,25	0	0
-5	18	1,75	0	19	1	1	1
-6	28	4	4	29	2,75	0	4
-7	40	6,75	0	41	5	5	5
-8	54	10	10	55	7,75	0	10
-9	70	13,75	0	71	11	11	11
-10	88	18	18	89	14,75	0	18
-11	108	22,75	0	109	19	19	19
-12	130	28	28	131	23,75	0	28
-13	154	33,75	0	155	29	29	29
-14	180	40	40	181	34,75	0	40
-15	208	46,75	0	209	41	41	41

Figure 1. Sequence A217571 is the row Y[-1] of the combined D-Destroyers and D-Submarines parabolas in $PS[x + 2, x, x]$. Because of the change of offset that occurs when we put the zeros, the direction of the final sequence is reversed.

The complete sequence in row Y[-1] with positive, zero, and negative indexes is:
 $A217571 \equiv \{ \dots, 271, 238, 239, 208, 209, 180, 181, 154, 155, 130, 131, 108, 109, 88, 89, 70, 71, 54, 55, 40, 41, 28, 29, 18, 19, 10, 11, 4, 5, 0, 1, -2, -1, -2, -1, 0, 1, 4, 5, 10, 11, 18, 19, 28, 29, 40, 41, 54, 55, 70, 71, 88, 89, 108, 109, 130, 131, 154, 155, 180, 181, 208, 209, 238, 239, 270, 271, 304, 305, 340, 341, \dots \}$.

2.4.2 The row $Y[0] = X_2[x]$

The center of the row $Y[0] \equiv \{\dots, 2, 2, 0, 0, 0, 0, \dots\}$.

The row $Y[0]$ is the result of the interlacing between two quadratics:

$$Y[0] = X_2[x = \text{even}] + X_2[x = \text{Odd}]$$

$X_2[x = \text{Even}]$ is based on sequence $[2, 0, 0] = n^2 - n \equiv A002378 \equiv n(n \pm 1)$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$\begin{aligned} X_2[x = \text{Even}] &\equiv A000002030708 \equiv [2, 0, 0, 0, 0, 0] \equiv \left(\frac{x}{2}\right)^2 - \frac{x}{2} = \frac{x^2 - 2x}{4} \\ &= 0.25x^2 - 0.5x \equiv \frac{A005563}{4} \equiv [0, -0.25, 0] = \frac{x^2 - 1^2}{2^2} @f = 0 \end{aligned}$$

$AXXXXXX \equiv \{\dots, 0, 42, 0, 30, 0, 20, 0, 12, 0, 6, 0, 2, 0, 0, 0, 0, 2, 0, 6, 0, 12, 0, 20, 0, 30, 0, 42, 0, 56, 0, \dots\}$

and

$X_2[x = \text{Odd}]$ is based on sequence $[2, 0, 0] = n^2 - n \equiv A002378$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$\begin{aligned} X_2[x = \text{Odd}] &\equiv A000002030708 \equiv [0, 2, 0, 0, 0, 0] = \left(\frac{x + 1}{2}\right)^2 - \frac{x + 1}{2} \\ &= \frac{x^2 + 2x + 1 - 2x - 2}{4} = \frac{x^2 - 1}{4} = 0.25x^2 - 0.25 \equiv \frac{A005563}{4} \\ &\equiv [0, -0.25, 0] = \frac{x^2 - 1^2}{2^2} @f = 0 \end{aligned}$$

$AXXXXXX \equiv \{\dots, 56, 0, 42, 0, 30, 0, 20, 0, 12, 0, 6, 0, 2, 0, 0, 0, 0, 2, 0, 6, 0, 12, 0, 20, 0, 30, 0, 42, 0, 56, \dots\}$

$$X_2[-x = \text{Even}] = \frac{x^2 - 2x}{4} = 0.25x^2 - 0.5x \equiv \frac{A005563}{4}$$

$$X_2[-x = \text{Odd}] = \frac{x^2 - 1}{4} = 0.25x^2 - 0.25 \equiv \frac{A005563}{4}$$

$$X_2[-x] = X_2[-x = \text{even}] + X_2[-x = \text{Odd}]$$

$$X_2[-x] = \frac{x^2 - (x + x(-1)^x) - (0.5 - 0.5(-1)^x)}{4}$$

$$X_2[-x] = \frac{x^2 - x - 0.5 - (x + 0.5)(-1)^x}{4}$$

$$X_2[-x] = \frac{2x^2 - 2x - 1 - (2x + 1)(-1)^x}{8}$$

Process table to produce the row Y[0]							
Classif.	DES	SUB		DES	SUB		
y_ip	0,5	1		0,5	0		X2 =
f	0	1		0	0		X2[Even]
	A002378	X2[Even]	X2[Even]	A002378	X2[Odd]	X2[Odd]	+ X2[Odd]
a	1	0,25		1	0,25		
b	-1	-0,5		-1	0		
c	0	0	AXXXXXX	0	-0,25	AXXXXXX	A110660
15	210	48,75	0	210	56	56	56
14	182	42	42	182	48,75	0	42
13	156	35,75	0	156	42	42	42
12	132	30	30	132	35,75	0	30
11	110	24,75	0	110	30	30	30
10	90	20	20	90	24,75	0	20
9	72	15,75	0	72	20	20	20
8	56	12	12	56	15,75	0	12
7	42	8,75	0	42	12	12	12
6	30	6	6	30	8,75	0	6
5	20	3,75	0	20	6	6	6
4	12	2	2	12	3,75	0	2
3	6	0,75	0	6	2	2	2
2	2	0	0	2	0,75	0	0
Y[1]	1	0	-0,25	0	0	0	0
Y[0]	0	0	0	0	-0,25	0	0
Y[-1]	-1	2	0,75	0	0	0	0
-2	6	2	2	6	0,75	0	2
-3	12	3,75	0	12	2	2	2
-4	20	6	6	20	3,75	0	6
-5	30	8,75	0	30	6	6	6
-6	42	12	12	42	8,75	0	12
-7	56	15,75	0	56	12	12	12
-8	72	20	20	72	15,75	0	20
-9	90	24,75	0	90	20	20	20
-10	110	30	30	110	24,75	0	30
-11	132	35,75	0	132	30	30	30
-12	156	42	42	156	35,75	0	42
-13	182	48,75	0	182	42	42	42
-14	210	56	56	210	48,75	0	56
-15	240	63,75	0	240	56	56	56

Figure 1. Sequence A110660 is the row Y[0] of the combined D-Destroyers and D-Submarines parabolas in $PS[x + 2, x, x]$.

The complete sequence in row Y[0] with positive, zero, and negative indexes is:
 A110660 \equiv
 {..., 56, 42, 42, 30, 30, 20, 20, 12, 12, 6, 6, 2, 2, 0, 0, 0, 0, 2, 2, 6, 6, 12, 12, 20, 20, 30, 30, 42, 42, 56, 56, ... }.

2.4.3 The row $Y[1] = X_3[x]$

The center of the row $Y[1] \equiv \{\dots, 6, 5, 2, 1, 0, -1, \dots\}$.

The row $Y[1]$ is the result of the interlacing between two quadratics:

$$Y[1] = X_3[x = \text{even}] + X_3[x = \text{Odd}]$$

$X_3[x = \text{Even}]$ is based on sequence $[6, 2, 0] = n^2 - 3n + 2 \equiv A002378 \equiv n(n \pm 1)$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_3[x = \text{Even}] \equiv A00002030708 \equiv [6, 0, 2, 0, 0] \equiv \left(\frac{x}{2}\right)^2 - \frac{3x}{2} + 2 = \frac{x^2 - 6x + 8}{4}$$

$$= 0.25x^2 - 1.5x + 2 \equiv \frac{A005563}{4} \equiv [0, -0.25, 0] = \frac{x^2 - 1^2}{2^2} @f = 0$$

$AXXXXXX \equiv \{\dots, 0, 42, 0, 30, 0, 20, 0, 12, 0, 6, 0, 2, 0, 0, 0, 0, 2, 0, 6, 0, 12, 0, 20, 0, 30, 0, 42, 0, 56, 0, \dots\}$

and

$X_3[x = \text{Odd}]$ is based on sequence $[5, 1, -1] = n^2 - 3n + 1 \equiv A165900$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_3[x = \text{Odd}] \equiv A1060509000 \equiv [0, 5, 0, 1, 0, -1] = \left(\frac{x + 1}{2}\right)^2 - \frac{3x + 3}{2} + 1$$

$$= \frac{x^2 + 2x + 1 - 6x - 6 + 4}{4} = \frac{x^2 - 4x - 1}{4} = 0.25x^2 - x - 0.25$$

$$\equiv \frac{A028875}{4} \equiv [-1, -1.25, -1] = \frac{x^2 - (\sqrt{5})^2}{2^2} @f = 0$$

$AXXXXXX$

$\equiv \{\dots, 71, 0, 55, 0, 41, 0, 29, 0, 19, 0, 11, 0, 5, 0, 1, 0, -1, 0, -1, 0, 1, 0, 5, 0, 11, 0, 19, 0, 29, 0, 41, \dots\}$

$$X_3[-x = \text{Even}] = \frac{x^2 - 6x + 8}{4} \equiv \frac{A005563}{4}$$

$$X_3[-x = \text{Odd}] = \frac{x^2 - 4x - 1}{4} \equiv \frac{A028875}{4}$$

$$X_3[-x] = X_3[-x = \text{even}] + X_3[-x = \text{Odd}]$$

$$X_3[-x] = \frac{x^2 - (5x + x(-1)^x) - (4.5 + 3.5(-1)^x)}{4}$$

$$X_3[-x] = \frac{x^2 - 5x - 4.5 - (x + 3.5)(-1)^x}{4}$$

$$X_3[-x] = \frac{2x^2 - 10x - 9 - (2x + 7)(-1)^x}{8}$$

Process table to produce the row Y[1]						
Classif.	DES	SUB		DES	SUB	
y_ip	1,5	3		1,5	2	
f	1	3		1	2	
	A002378	X3[Even]	X3[Even]	A165900	X3[Odd]	X3[Odd]
a	1	0,25		1	0,25	
b	-3	-1,5		-3	-1	
c	2	2	AXXXXXX	1	-0,25	AXXXXXX
						X3 = X3[Even] + X3[Odd]
						A188652
15	182	35,75	0	181	41	41
14	156	30	30	155	34,75	0
13	132	24,75	0	131	29	29
12	110	20	20	109	23,75	0
11	90	15,75	0	89	19	19
10	72	12	12	71	14,75	0
9	56	8,75	0	55	11	11
8	42	6	6	41	7,75	0
7	30	3,75	0	29	5	5
6	20	2	2	19	2,75	0
5	12	0,75	0	11	1	1
4	6	0	0	5	-0,25	0
3	2	-0,25	0	1	-1	-1
2	0	0	0	-1	-1,25	0
Y[1]	1	0	0,75	0	-1	-1
Y[0]	0	2	2	1	-0,25	0
Y[-1]	-1	6	3,75	5	1	1
-2	12	6	6	11	2,75	0
-3	20	8,75	0	19	5	5
-4	30	12	12	29	7,75	0
-5	42	15,75	0	41	11	11
-6	56	20	20	55	14,75	0
-7	72	24,75	0	71	19	19
-8	90	30	30	89	23,75	0
-9	110	35,75	0	109	29	29
-10	132	42	42	131	34,75	0
-11	156	48,75	0	155	41	41
-12	182	56	56	181	47,75	0
-13	210	63,75	0	209	55	55
-14	240	72	72	239	62,75	0
-15	272	80,75	0	271	71	71

Figure 1. Sequence A188652 is the row Y[1] of the combined D-Destroyers and D-Submarines parabolas in $PS[x + 2, x, x]$.

The complete sequence in row Y[1] with positive, zero, and negative indexes is:
A188652 \equiv

{..., 41, 30, 29, 20, 19, 12, 11, 6, 5, 2, 1, 0, -1, 0, -1, 2, 1, 6, 5, 12, 11, 20, 19, 30, 29, 42, 41, 56, 55, 72, 71, ...}.

Approximately, the elements of row Y[1] form the junction of the sequences:

A140144 $a(1)=1$, $a(n)=a(n-1)+n^1$ if n odd, $a(n)=a(n-1)+n^0$ if n is even. {1, 2, 5, 6, 11, 12, 19, 20, 29, 30, 41, 42, 55, 56, 71, 72, 89, 90, 109, 110, 131, 132, 155, 156, 181, 182, 209, 210, 239, 240, 271, 272, 305, 306, 341, 342, 379, 380, 419, 420, 461, 462, 505, 506, 551, 552, 599, 600, 649, 650, 701, 702, 755, 756, 811, 812, 869, ...} in the left side, and

A188652 First differences of A000463 {0, 1, 2, -1, 6, -5, 12, -11, 20, -19, 30, -29, 42, -41, 56, -55, 72, -71, 90, -89, 110, -109, 132, -131, 156, -155, 182, -181, 210, -209, 240, -239, 272, -271, 306, -305, 342, -341, 380, -379, 420, -419, 462, -461, 506, -505, 552, -551, 600, -599, 650, -649, 702, -701, 756, -755, 812, -811, 870, -869, 930, -929, 992, -991, 1056, -1055, 1122, -1121, 1190, -1189, 1260, -1259, 1332, -1331, 1406, ...} in the right side, where

- A000463 is n followed by n^2 {1, 1, 2, 4, 3, 9, 4, 16, 5, 25, 6, 36, 7, 49, 8, 64, 9, 81, 10, 100, 11, 121, 12, 144, 13, 169, 14, 196, 15, 225, 16, 256, 17, 289, 18, 324, 19, 361, 20, 400, 21, 441, 22, 484, 23, 529, 24, 576, 25, 625, 26, 676, 27, 729, 28, 784, 29, 841, 30, 900, 31, 961, 32, 1024, 33, 1089, 34, 1156, 35, 1225, 36, 1296, ...}.

-11	-10	-9,3	-8,3	-7,3	-6,3	-5,3	-4,3	-3,3	-2,3	-1,3	-0,3	0,75	1,75	2,75	3,75	4,75	5,75	6,75	7,75	8,75	9,75	10,8
-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
45	41	37	33	29	25	21	17	13	9	5	1	-3	-7	-11	-15	-19	-23	-27	-31	-35	-39	-43
6,71	6,4	6,08	5,74	5,39	5	4,58	4,12	3,61	3	2,24	1	####	####	####	####	####	####	####	####	####	####	####
0,71	0,4	0,08	0,74	0,39	0	0,58	0,12	0,61	0	0,24	0	####	####	####	####	####	####	####	####	####	####	####
3,85	3,7	3,54	3,37	3,19	3	2,79	2,56	2,3	2	1,62	1	####	####	####	####	####	####	####	####	####	####	####
-2,9	-2,7	-2,5	-2,4	-2,2	-2	-1,8	-1,6	-1,3	-1	-0,6	0	####	####	####	####	####	####	####	####	####	####	####
-6,7	-6,4	-6,1	-5,7	-5,4	-5	-4,6	-4,1	-3,6	-3	-2,2	-1	####	####	####	####	####	####	####	####	####	####	####
DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES	DES
0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1
-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11
-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11
-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13
-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67
61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101
99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121

Figure 1. A larger view of the trianz $TZ[x + 2, x, x]$ when divided into the 4 regions according to sequences A217570, A217571, A217575, and A005563.

Except for the numbers 0,1,4 the sequence A217570 contains all A000290 the Square numbers. Let's call the area occupied by the sequence A217570 the *area of the squares*.

The sequence A217571 contains all the A165900 Values of Fibonacci polynomial and A028552 $Y[y] = y^2 - y - 2 \equiv y(y + 3)$. Let's call the area occupied by the sequence A217571 the *Fibonacci area*.

The sequence A217575 contains all the A002378 Oblong numbers. Let's call the area occupied by the sequence A217575 the *Oblong area*.

The sequence A005563 contains all the (Square minus One) numbers. Let's call the area occupied by the sequence A005563 (*Square minus One*) area.

Figure 1. Color map of the 4 areas.

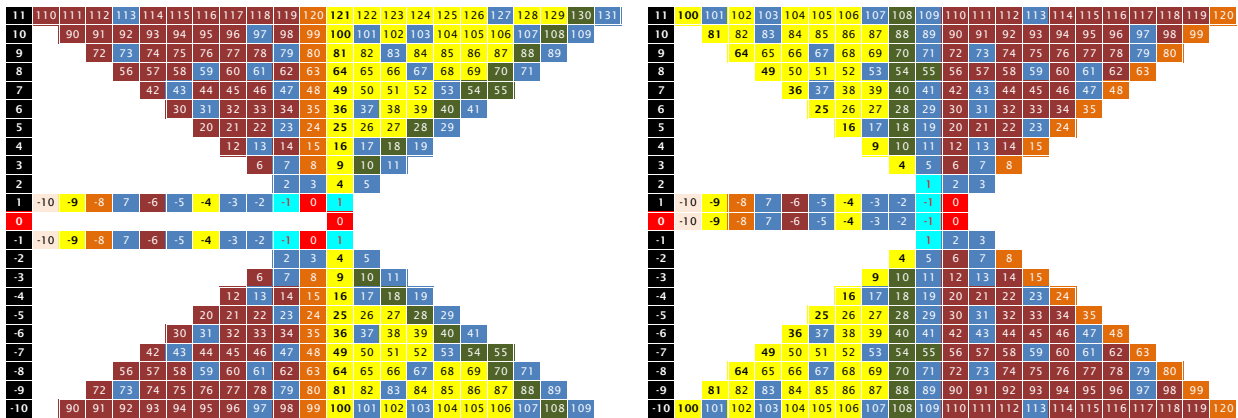


Figure 1. The square area, the oblong area, the (square minus 1) area, and the Fibonacci area in trianz $TZ[x + 1, x, x + 1]$ and $TZ[x + 2, x, x]$ when divided into the 4 regions according to sequences A217570, A217571, A217575, and A005563.

We can see that:

1. A334163 All primes located between an oblong number and its following square number {3, 7, 13, 23, 31, 43, 47, 59, 61, 73, 79, 97, 113, 137, 139, 157, 163, 167, 191, 193, 211, 223, 241, 251, 277, 281, 283, 307, 311, 313, 317, 347, 349, 353, 359, 383, 389, 397, 421, 431, 433, 439, 463, 467, 479, 509, 521, 523, 557, 563, 569, 571, 601, 607, 613, 617, 619, ...} are in the Oblong area. The only prime number in the Oblong area, but not in the sequence A334163 is Prime 2.
2. A307508 All primes that are located between a square number and its following oblong number {2, 5, 11, 17, 19, 29, 37, 41, 53, 67, 71, 83, 89, 101, 103, 107, 109, 127, 131, 149, 151, 173, 179, 181, 197, 199, 227, 229, 233, 239, 257, 263, 269, 271, 293, 331, 337, 367, 373, 379, 401, 409, 419, 443, 449, 457, 461, 487, 491, 499, 503, 541, 547, 577, 587, 593, 599, ...} are distributed between the Fibonacci and Squares areas. The only prime number in the sequence A307508 but not in the Fibonacci and Squares areas is Prime 2.

So, we can conclude that:

1. We should deepen the treatment of Prime 2 concerning sequences A334163 and A307508.
2. We can sub-divide the sequence A307508 into two parts:
 - a. Primes from A217571. They are all located between a square number and its following oblong which is the sequence A002327 Primes of the form $n^2 - n - 1$. {5, 11, 19, 29, 41, 71, 89, 109, 131, 181, 239, 271, 379, 419, 461, 599, 701, 811, 929, 991, 1259, 1481, 1559, 1721, 1979, 2069, 2161, 2351, 2549, 2861, 2969, 3079, 3191, 3539, 3659, 4159, 4289, 4421, 4691, 4969, 5851, 6971, 7309, 7481, 8009, 8741, 8929, ...}. Also primes of form *Oblong* $\pm x \pm y$ or $xy \pm x \pm y$, where x and y are two consecutive numbers:

$$xy + x + y = x(x - 1) + x + (x - 1) = x^2 + x - 1$$

$$xy - x - y = x(x - 1) - x - (x - 1) = x^2 - 3x + 1 \equiv x^2 - x - 1$$
 - b. Axxxxxx Primes from A217570. They are all located between a square number and its following oblong {17, 37, 53, 67, 83, 101, 103, 107, 127, 149, 151, 173, 179, 197, 199, 227, 229, 233, 257, 263, 269, 293, 331, 337, 367, 373, 401, 409, 443, 449, 457, 487, 491, 499, 503, 541, 547, 577, 587, 593, 631, 641, 643, 647, 677, 683, 691, 733, 739, 743, 751, 787, 797, 809, 853, 857, 859, 863, 907, 911, 919, 967, 971, 977, 983, 1031, 1033, 1039, 1049, 1051, 1091, 1093, 1097, 1103, 1109, 1117, 1163, 1171, 1181, 1187, 1229, 1231, 1237, 1249, 1297, 1301, 1303, 1307, 1319, 1321, 1327, 1373, 1381, 1399, 1447, 1451, 1453, 1459, 1471, 1523, 1531, 1543, 1549, 1553, 1601, 1607, 1609, 1613, 1619, 1621, 1627, 1637, ...}, where

$$Axxxxxx = \text{elements from A30750 without the elements A217571.}$$
3. To study the distribution of primes in these areas.

3.2 The C-Destroyer parabolas with variable offset on a vertical of $PS[x + 2, x, x]$

See the picture:

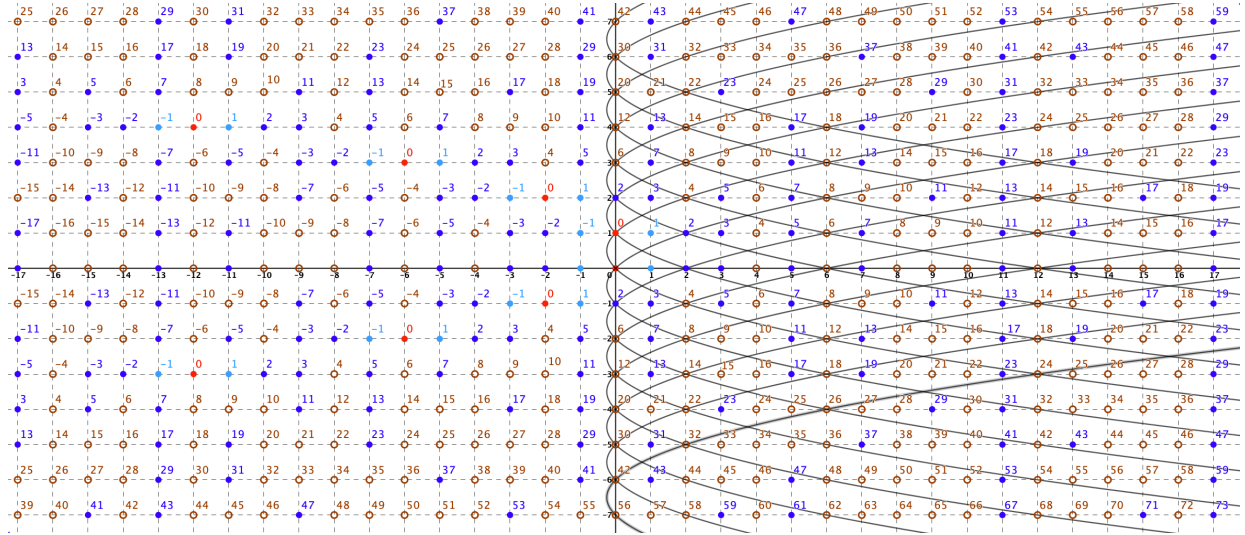


Figure 1. The C-Destroyer parabolas in column $x = 0$ of the lattice-grid $PS[x + 2, x, x]$. They have offset following the staircase function with the step of a unit. These parabolas have equations in the XY plane of the form $x = y^2 - Odd * y + Oblong$. In terms of the offset value: $x = y^2 - (2f + 1)y + (f^2 + f)$.

Each parabola $x = y^2 - (2f + 1)y + (f^2 + f)$ in lattice-grid $PS[x + 2, x, x]$ will produce a quadratic sequence of the form $Y[y] = ay^2 + by + c$. Now, to determine the coefficients a, b, c , for each sequence we have to determine three consecutive elements.

Over each parabola, we can choose 3 consecutive elements from top to bottom or from bottom to top. Because we are synchronizing the y index with the Y-axis, we will choose 3 consecutive bottom-up elements which is the increasing index direction: $[Y[-1], Y[0], Y[1]]$.

The elements of row $y = -1$ in the new paraboctys will be noted as $@Y[-1]$.

The elements of row $y = 0$ in the new paraboctys will be noted as $@Y[0]$.

The elements of row $y = 1$ in the new paraboctys will be noted as $@Y[1]$.

So, let's create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]]$. This new paraboctys will contain all the sequences formed by the C-Destroyer parabolas with a variable offset in a vertical of lattice-grid $PS[x + 2, x, x]$.

As we have C-Destroyer parabolas, we can understand each sequence as being made of one element of the vertical column $x = 2$ to assume the $@Y[-1]$ elements position and two elements of the vertical column $x = 0$ to assume the $@Y[0]$ and $@Y[1]$ elements positions.

3.3 The C-Submarine parabolas with variable offset on a vertical of $PS[x + 2, x, x]$

See the picture:

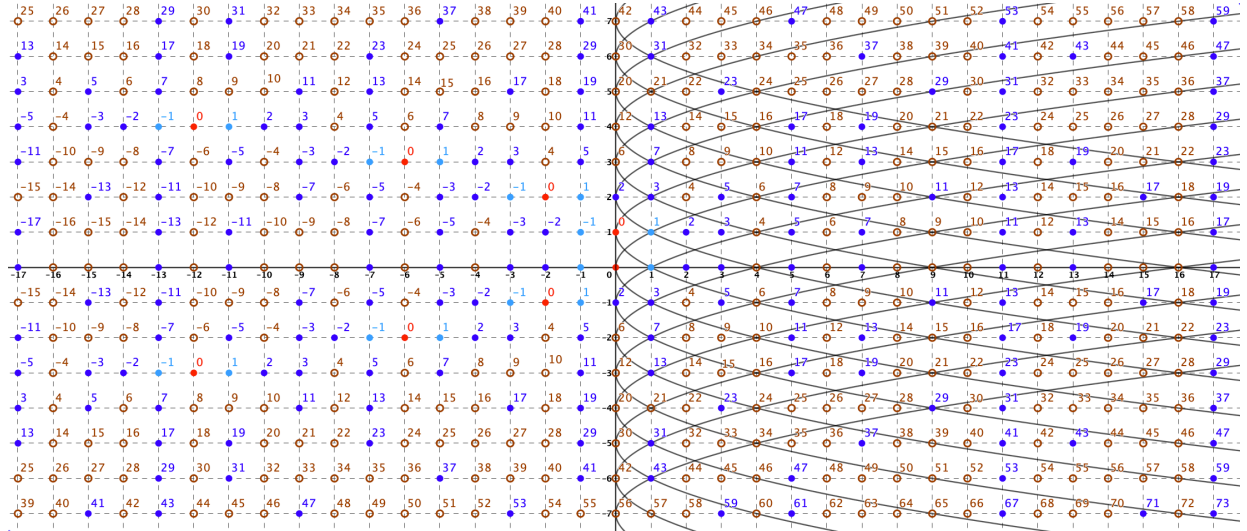


Figure 1. The C-Submarine parabolas in column $x = 0$ of the lattice-grid $PS[x + 2, x, x]$. They have offset following the staircase function with the step of a unit. These parabolas have equations in the XY plane of the form $x = y^2 - \text{Even} * y + \text{Square}$. In terms of the offset value $x = y^2 - 2fy + f^2$.

Each parabola $x = y^2 - 2fy + f^2$ in lattice-grid $PS[x + 2, x, x]$ will produce a quadratic sequence of the form $Y[y] = ay^2 + by + c$. Now, to determine the coefficients a, b, c , for each sequence we have to determine three consecutive elements.

Over each parabola, we can choose 3 consecutive elements from top to bottom or from bottom to top. Because we are synchronizing the y index with the Y-axis, we will choose 3 consecutive bottom-up elements which is the increasing index direction: $[Y[-1], Y[0], Y[1]]$.

The elements of row $y = -1$ in the new paraboctys will be noted as $@Y[-1]$.

The elements of row $y = 0$ in the new paraboctys will be noted as $@Y[0]$.

The elements of row $y = 1$ in the new paraboctys will be noted as $@Y[1]$.

So, let's create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]]$. This new paraboctys will contain all the sequences formed by the C-Submarine parabolas with a variable offset in a vertical of lattice-grid $PS[x + 2, x, x]$.

As we have C-Submarine parabolas, we can understand each sequence as being made of two elements of the vertical column $x = 1$ to assume the $@Y[-1]$ and $@Y[1]$ elements position and one element of the vertical column $x = 0$ to assume the $@Y[0]$ elements positions.

3.4.1 The row $Y[-1] = X_1[x]$

The center of the row $Y[-1] \equiv \{\dots, 1, 2, 1, 2, 3, 4, \dots\}$.

The row $Y[-1]$ is the result of the interlacing between two quadratics:

$$Y[-1] = X_1[x = \text{even}] + X_1[x = \text{Odd}]$$

$X_1[x = \text{Even}]$ is based on sequence $[1, 1, 3] = n^2 + n + 1 \equiv A002061$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_1[x = \text{Even}] \equiv A00002000601 \equiv [1, 0, 2, 0, 3, 0] \equiv \left(\frac{x}{2}\right)^2 + \frac{x}{2} + 1 = \frac{x^2 + 2x + 4}{4}$$

$$= 0.25x^2 + 0.5x + 1 \equiv \frac{A117950}{4} \equiv [1, 0.75, 1] = \frac{x^2 + (\sqrt{3})^2}{2^2} @f = 0$$

$$AXXXXXX \equiv \{\dots, 0, 57, 0, 43, 0, 31, 0, 21, 0, 13, 0, 7, 0, 3, 0, 1, 0, 1, 0, 3, 0, 7, 0, 13, 0, 21, 0, 31, 0, 43, 0, \dots\}$$

and

$X_1[x = \text{Odd}]$ is based on sequence $[2, 2, 4] = n^2 + n + 2 \equiv A014206$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_1[x = \text{Odd}] \equiv A000104020006 \equiv [2, 0, 2, 0, 4, 0] = \left(\frac{x + 1}{2}\right)^2 + \frac{x + 1}{2} + 2$$

$$= \frac{x^2 + 2x + 1 + 2x + 2 + 8}{4} = \frac{x^2 + 4x + 11}{4} = 0.25x^2 + x + 2.75$$

$$\equiv \frac{A117619}{4} \equiv [2, 1.75, 2] = \frac{x^2 + (\sqrt{7})^2}{2^2} @f = 0$$

$$AXXXXXX \equiv \{\dots, 74, 0, 58, 0, 44, 0, 32, 0, 22, 0, 14, 0, 8, 0, 4, 0, 2, 0, 2, 0, 4, 0, 8, 0, 14, 0, 22, 0, 32, 0, 44, \dots\}$$

$$X_1[-x = \text{Even}] = \frac{x^2 + 2x + 4}{4} \equiv \frac{A117950}{4}$$

$$X_1[-x = \text{Odd}] = \frac{x^2 + 4x + 11}{4} \equiv \frac{A117619}{4}$$

$$X_1[-x] = X_1[-x = \text{even}] + X_1[-x = \text{Odd}]$$

$$X_1[-x] = \frac{x^2 + (3x - x(-1)^x) + (7.5 - 3.5(-1)^x)}{4}$$

$$X_1[-x] = \frac{x^2 + 3x + 7.5 - (x + 3.5)(-1)^x}{4}$$

$$X_1[-x] = \frac{2x^2 + 6x + 15 - (2x + 7)(-1)^x}{8}$$

Process table to produce the row Y[-1]							
Classif.	DES	SUB		DES	SUB		
y_ip	-0,5	-1	X1 [Even]	-0,5	-2	X1 [Odd]	X1 = X1 [Even] + X1 [Odd]
f	-1	-1		-1	-2		
	A002061	X1 [Even]		A014206	X1 [Odd]		
a	1	0,25		1	0,25		
b	1	0,5		1	1		
c	1	1	AXXXXXX	2	2,75	AXXXXXX	AXXXXXX
15	241	64,75	0	242	74	74	74
14	211	57	57	212	65,75	0	57
13	183	49,75	0	184	58	58	58
12	157	43	43	158	50,75	0	43
11	133	36,75	0	134	44	44	44
10	111	31	31	112	37,75	0	31
9	91	25,75	0	92	32	32	32
8	73	21	21	74	26,75	0	21
7	57	16,75	0	58	22	22	22
6	43	13	13	44	17,75	0	13
5	31	9,75	0	32	14	14	14
4	21	7	7	22	10,75	0	7
3	13	4,75	0	14	8	8	8
2	7	3	3	8	5,75	0	3
Y[1]	1	3	1,75	0	4	4	4
Y[0]	0	1	1	1	2	2,75	0
Y[-1]	-1	1	0,75	0	2	2	2
-2	3	1	1	4	1,75	0	1
-3	7	1,75	0	8	2	2	2
-4	13	3	3	14	2,75	0	3
-5	21	4,75	0	22	4	4	4
-6	31	7	7	32	5,75	0	7
-7	43	9,75	0	44	8	8	8
-8	57	13	13	58	10,75	0	13
-9	73	16,75	0	74	14	14	14
-10	91	21	21	92	17,75	0	21
-11	111	25,75	0	112	22	22	22
-12	133	31	31	134	26,75	0	31
-13	157	36,75	0	158	32	32	32
-14	183	43	43	184	37,75	0	43
-15	211	49,75	0	212	44	44	44

Figure 1. Sequence AXXXXXX is the row Y[-1] of the combined C-Destroyers and C-Submarines parabolas in $PS[x + 2, x, x]$. Because of the change of offset that occurs when we put the zeros, the direction of the final sequence is reversed.

The complete sequence in row Y[-1] with positive, zero, and negative indexes is:
 $AXXXXXX \equiv \{ \dots, 212, 183, 184, 157, 158, 133, 134, 111, 112, 91, 92, 73, 74, 57, 58, 43, 44, 31, 32, 21, 22, 13, 14, 7, 8, 3, 4, 1, 2, 1, 2, 3, 4, 7, 8, 13, 14, 21, 22, 31, 32, 43, 44, 57, 58, 73, 74, 91, 92, 111, 112, 133, 134, 157, 158, 183, 184, 211, 212, 241, 242, 273, \dots \}$.

Obs.: (to create new sequences with Zeros between elements, and generalize the work of Sato link <http://vixra.org/pdf/1210.0025v7.pdf>)

3.4.2 The row $Y[0] = X_2[x]$

The center of the row $Y[0] \equiv \{\dots, 2, 2, 0, 0, 0, 0, \dots\}$.

The row $Y[0]$ is the result of the interlacing between two quadratics:

$$Y[0] = X_2[x = \text{even}] + X_2[x = \text{Odd}]$$

$X_2[x = \text{Even}]$ is based on sequence $[2, 0, 0] = n^2 - n \equiv A002378 \equiv n(n \pm 1)$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$\begin{aligned} X_2[x = \text{Even}] &\equiv A000002030708 \equiv [2, 0, 0, 0, 0, 0] \equiv \left(\frac{x}{2}\right)^2 - \frac{x}{2} = \frac{x^2 - 2x}{4} \\ &= 0.25x^2 - 0.5x \equiv \frac{A005563}{4} \equiv [0, -0.25, 0] = \frac{x^2 - 1^2}{2^2} @f = 0 \end{aligned}$$

$AXXXXXX \equiv \{\dots, 0, 42, 0, 30, 0, 20, 0, 12, 0, 6, 0, 2, 0, 0, 0, 0, 2, 0, 6, 0, 12, 0, 20, 0, 30, 0, 42, 0, 56, 0, \dots\}$

and

$X_2[x = \text{Odd}]$ is based on sequence $[2, 0, 0] = n^2 - n \equiv A002378$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$\begin{aligned} X_2[x = \text{Odd}] &\equiv A000002030708 \equiv [0, 2, 0, 0, 0, 0] = \left(\frac{x + 1}{2}\right)^2 - \frac{x + 1}{2} \\ &= \frac{x^2 + 2x + 1 - 2x - 2}{4} = \frac{x^2 - 1}{4} = 0.25x^2 - 0.25 \equiv \frac{A005563}{4} \\ &\equiv [0, -0.25, 0] = \frac{x^2 - 1^2}{2^2} @f = 0 \end{aligned}$$

$Axxxxxx \equiv \{\dots, 56, 0, 42, 0, 30, 0, 20, 0, 12, 0, 6, 0, 2, 0, 0, 0, 0, 2, 0, 6, 0, 12, 0, 20, 0, 30, 0, 42, 0, 56, \dots\}$

$$X_2[-x = \text{Even}] = \frac{x^2 - 2x}{4} = 0.25x^2 - 0.5x \equiv \frac{A005563}{4}$$

$$X_2[-x = \text{Odd}] = \frac{x^2 - 1}{4} = 0.25x^2 - 0.25 \equiv \frac{A005563}{4}$$

$$X_2[-x] = X_2[-x = \text{even}] + X_2[-x = \text{Odd}]$$

$$X_2[-x] = \frac{x^2 - (x + x(-1)^x) - (0.5 - 0.5(-1)^x)}{4}$$

$$X_2[-x] = \frac{x^2 - x - 0.5 - (x + 0.5)(-1)^x}{4}$$

$$X_2[-x] = \frac{2x^2 - 2x - 1 - (2x + 1)(-1)^x}{8}$$

Process table to produce the row Y[0]							
Classif.	DES	SUB		DES	SUB		
y_ip	0,5	1		0,5	0		X2 =
f	0	1		0	0		X2[Even]
	A002378	X2[Even]	X2[Even]	A002378	X2[Odd]	X2[Odd]	+ X2[Odd]
a	1	0,25		1	0,25		
b	-1	-0,5		-1	0		
c	0	0	AXXXXXX	0	-0,25	AXXXXXX	A110660
15	210	48,75	0	210	56	56	56
14	182	42	42	182	48,75	0	42
13	156	35,75	0	156	42	42	42
12	132	30	30	132	35,75	0	30
11	110	24,75	0	110	30	30	30
10	90	20	20	90	24,75	0	20
9	72	15,75	0	72	20	20	20
8	56	12	12	56	15,75	0	12
7	42	8,75	0	42	12	12	12
6	30	6	6	30	8,75	0	6
5	20	3,75	0	20	6	6	6
4	12	2	2	12	3,75	0	2
3	6	0,75	0	6	2	2	2
2	2	0	0	2	0,75	0	0
Y[1]	1	0	-0,25	0	0	0	0
Y[0]	0	0	0	0	-0,25	0	0
Y[-1]	-1	2	0,75	0	0	0	0
-2	6	2	2	6	0,75	0	2
-3	12	3,75	0	12	2	2	2
-4	20	6	6	20	3,75	0	6
-5	30	8,75	0	30	6	6	6
-6	42	12	12	42	8,75	0	12
-7	56	15,75	0	56	12	12	12
-8	72	20	20	72	15,75	0	20
-9	90	24,75	0	90	20	20	20
-10	110	30	30	110	24,75	0	30
-11	132	35,75	0	132	30	30	30
-12	156	42	42	156	35,75	0	42
-13	182	48,75	0	182	42	42	42
-14	210	56	56	210	48,75	0	56
-15	240	63,75	0	240	56	56	56

Figure 1. Sequence A110660 is the row Y[0] of the combined C-Destroyers and C-Submarines parabolas in $PS[x + 2, x, x]$.

The complete sequence in row Y[0] with positive, zero, and negative indexes is:
 A110660 \equiv
 { ..., 56, 42, 42, 30, 30, 20, 20, 12, 12, 6, 6, 2, 2, 0, 0, 0, 0, 2, 2, 6, 6, 12, 12, 20, 20, 30, 30, 42, 42, 56, 56, ... }.

3.4.3 The row $Y[1] = X_3[x]$

The center of the row $Y[1] \equiv \{\dots, 7, 6, 3, 2, 1, 0, \dots\}$.

The row $Y[1]$ is the result of the interlacing between two quadratics:

$$Y[1] = X_3[x = \text{even}] + X_3[x = \text{Odd}]$$

$X_3[x = \text{Even}]$ is based on sequence $[7, 3, 1] = n^2 - 3n + 3 \equiv A002061$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_3[x = \text{Even}] \equiv A00002000601 \equiv [7, 0, 3, 0, 1, 0] \equiv \left(\frac{x}{2}\right)^2 - \frac{3x}{2} + 3 = \frac{x^2 - 6x + 12}{4}$$

$$= 0.25x^2 - 1.5x + 3 \equiv \frac{A117950}{4} \equiv [1, 0.75, 1] = \frac{x^2 - (\sqrt{3})^2}{2^2} @f = 0$$

$AXXXXXX \equiv \{\dots, 0, 31, 0, 21, 0, 13, 0, 7, 0, 3, 0, 1, 0, 1, 0, 3, 0, 7, 0, 13, 0, 21, 0, 31, 0, 43, 0, 57, 0, 73, 0, \dots\}$

and

$X_3[x = \text{Odd}]$ is based on sequence $[6, 2, 0] = n^2 - 3n + 2 \equiv A002378$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_3[x = \text{Odd}] \equiv A0002030708 \equiv [0, 6, 0, 2, 0, 0] = \left(\frac{x + 1}{2}\right)^2 - \frac{3x + 3}{2} + 2$$

$$= \frac{x^2 + 2x + 1 - 6x - 6 + 8}{4} = \frac{x^2 - 4x + 3}{4} = 0.25x^2 - x + 0.75$$

$$\equiv \frac{A005563}{4} \equiv [0, -0.25, 0] = \frac{x^2 - 1^2}{2^2} @f = 0$$

$AXXXXXX \equiv \{\dots, 42, 0, 30, 0, 20, 0, 12, 0, 6, 0, 2, 0, 0, 0, 2, 0, 6, 0, 12, 0, 20, 0, 30, 0, 42, 0, 56, 0, 72, \dots\}$

$$X_3[x = \text{Even}] = \frac{x^2 - 6x + 8}{4} \equiv \frac{A117950}{4}$$

$$X_3[x = \text{Odd}] = \frac{x^2 - 4x - 1}{4} \equiv \frac{A005563}{4}$$

$$X_3[x] = X_3[x = \text{even}] + X_3[x = \text{Odd}]$$

$$X_3[x] = \frac{x^2 - (5x + x(-1)^x) - (4.5 + 3.5(-1)^x)}{4}$$

$$X_3[x] = \frac{x^2 - 5x - 4.5 - (x + 3.5)(-1)^x}{4}$$

$$X_3[-x] = \frac{2x^2 - 10x - 9 - (2x + 7)(-1)^x}{8}$$

Process table to produce the row Y[1]						
Classif.	DES	SUB		DES	SUB	
y_ip	1,5	3		1,5	2	
f	1	3		1	2	
	A002061	X3[Even]	X3[Even]	A002378	X3[Odd]	X3[Odd]
a	1	0,25		1	0,25	
b	-3	-1,5		-3	-1	
c	3	3	AXXXXXX	2	0,75	AXXXXXX
						X3 = X3[Even] + X3[Odd]
						A130404
15	183	36,75	0	182	42	42
14	157	31	31	156	35,75	0
13	133	25,75	0	132	30	30
12	111	21	21	110	24,75	0
11	91	16,75	0	90	20	20
10	73	13	13	72	15,75	0
9	57	9,75	0	56	12	12
8	43	7	7	42	8,75	0
7	31	4,75	0	30	6	6
6	21	3	3	20	3,75	0
5	13	1,75	0	12	2	2
4	7	1	1	6	0,75	0
3	3	0,75	0	2	0	0
2	1	1	1	0	-0,25	0
Y[1]	1	1	1,75	0	0	0
Y[0]	0	3	3	2	0,75	0
Y[-1]	-1	7	4,75	6	2	2
-2	13	7	7	12	3,75	0
-3	21	9,75	0	20	6	6
-4	31	13	13	30	8,75	0
-5	43	16,75	0	42	12	12
-6	57	21	21	56	15,75	0
-7	73	25,75	0	72	20	20
-8	91	31	31	90	24,75	0
-9	111	36,75	0	110	30	30
-10	133	43	43	132	35,75	0
-11	157	49,75	0	156	42	42
-12	183	57	57	182	48,75	0
-13	211	64,75	0	210	56	56
-14	241	73	73	240	63,75	0
-15	273	81,75	0	272	72	72

Figure 1. Sequence A130404 is the row Y[1] of the combined C-Destroyers and C-Submarines parabolas in $PS[x + 2, x, x]$.

The complete sequence in row Y[1] with positive, zero, and negative indexes is: $\backslash A130404 \backslash \equiv \{ \dots, 42, 31, 30, 21, 20, 13, 12, 7, 6, 3, 2, 1, 0, 1, 0, 3, 2, 7, 6, 13, 12, 21, 20, 31, 30, 43, 42, 57, 56, 73, 72, \dots \}$.

A130404 Numbers n such that floor(n/2) is a positive triangular number. Partial sums of A093178. 0, 1, 2, 3, 6, 7, 12, 13, 20, 21, 30, 31, 42, 43, 56, 57, 72, 73, 90, 91, 110, 111, 132, 133, 156, 157, 182, 183, 210, 211, 240, 241, 272, 273, 306, 307, 342, 343, 380, 381, 420, 421, 462, 463, 506, 507, 552, 553, 600, 601, 650, 651, 702, 703, 756, 757, 812, 813

A093178 If n is even then 1, otherwise n. 1, 1, 1, 3, 1, 5, 1, 7, 1, 9, 1, 11, 1, 13, 1, 15, 1, 17, 1, 19, 1, 21, 1, 23, 1, 25, 1, 27, 1, 29, 1, 31, 1, 33, 1, 35, 1, 37, 1, 39, 1, 41, 1, 43, 1, 45, 1, 47, 1, 49, 1, 51, 1, 53, 1, 55, 1, 57, 1, 59, 1, 61, 1, 63, 1, 65, 1, 67, 1, 69, 1, 71, 1, 73, 1, 75, 1, 77, 1, 79, 1, 81, 1, 83, 1, 85

4 Study of the sequences produced by the elements in D parabolic formation in the $PS[x + 1, x, x + 1]$

4.1 The D-Submarine parabolas with offset Zero in $PS[x + 1, x, x + 1]$

See the picture:

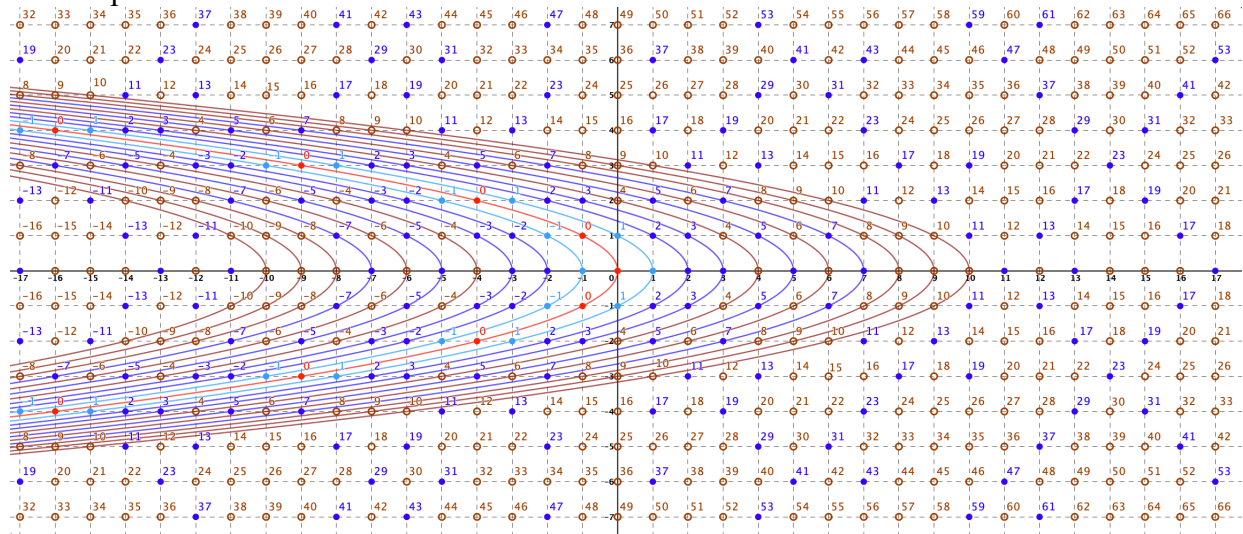


Figure 1. The D-Submarine parabolas of the form $x = -y^2 + c$ for $-10 \leq c \leq 10$ with offset $f = 0$ in lattice-grid $PS[x + 1, x, x + 1]$. They produce the paraboctys $PS[x, x, x]$.

Thus, the D-Submarine parabolas of the form $x = -y^2 + c$ for $-10 \leq c \leq 10$ with offset $f = 0$ in lattice-grid $PS[x + 2, x, x]$ produce paraboctys with coefficient $a = 0$. Each D-Submarine parabola with offset $f = 0$ has sequence $Y[y]$ only the constant value of its coefficient c .

Column ->	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
b	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
15	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
14	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
13	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
12	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
10	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
9	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
8	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
7	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
6	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
5	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
4	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
3	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
2	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
Y[1]	1	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Y[0]	0	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Y[-1]	-1	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
-2	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-3	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-4	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-5	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-6	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-7	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-8	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-9	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-10	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-12	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-13	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-14	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	
-15	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	

Figure 1. Paraboctys $PS[x, x, x]$. Initial vertical lines to form any specific paraboctys.

Thus, we can imagine the construction of the $PS[x + 1, x, x + 1]$ starting from infinite vertical lines of the same value according to the table above.

Then, we mold these vertical lines according to the D-Submarine parabolas of the form $x = -y^2 + c$, where $Y[y] = c$ with offset Zero.

This procedure produces the specific paraboctys $PS[x + 1, x, x + 1]$:

Column -->	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
x_ip	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
x_focus	-9,8	-8,8	-7,8	-6,8	-5,8	-4,8	-3,8	-2,8	-1,8	-0,8	0,25	1,25	2,25	3,25	4,25	5,25	6,25	7,25	8,25	9,25	10,3
LR	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Δ	40	36	32	28	24	20	16	12	8	4	0	-4	-8	-12	-16	-20	-24	-28	-32	-36	-40
$ \sqrt{\Delta} $	6,32	6	5,66	5,29	4,9	4,47	4	3,46	2,83	2	0	###	###	###	###	###	###	###	###	###	###
C. G.	0,32	0	0,66	0,29	0,9	0,47	0	0,46	0,83	0	0	###	###	###	###	###	###	###	###	###	###
Root1	3,16	3	2,83	2,65	2,45	2,24	2	1,73	1,41	1	0	###	###	###	###	###	###	###	###	###	###
Root2	-3,2	-3	-2,8	-2,6	-2,4	-2,2	-2	-1,7	-1,4	-1	0	###	###	###	###	###	###	###	###	###	###
Root2-Root1	-6,3	-6	-5,7	-5,3	-4,9	-4,5	-4	-3,5	-2,8	-2	0	###	###	###	###	###	###	###	###	###	###
Classif.	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB
y_ip	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
f	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
a	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
b	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
15	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235
14	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206
13	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179
12	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154
11	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131
10	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
9	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
8	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
7	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
6	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
5	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
3	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
2	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Y[1]	0	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Y[0]	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Y[-1]	-1	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
-2	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
-3	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
-4	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
-5	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
-6	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
-7	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
-8	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74
-9	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91
-10	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
-11	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131
-12	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154
-13	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179
-14	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206
-15	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235

Figure 1. The specific paraboctys $PS[x + 1, x, x + 1]$ in table format. The central column is the Square numbers sequence $A000290 \equiv [1,0,1] \equiv Y[y] = y^2$. Only line $Y[0]$ remains unshifted from $PS[x, x, x]$ to $PS[x + 2, x, x]$.

4.2 The D-Destroyer parabolas with variable offset on a vertical of $PS[x + 1, x, x + 1]$

See the picture:

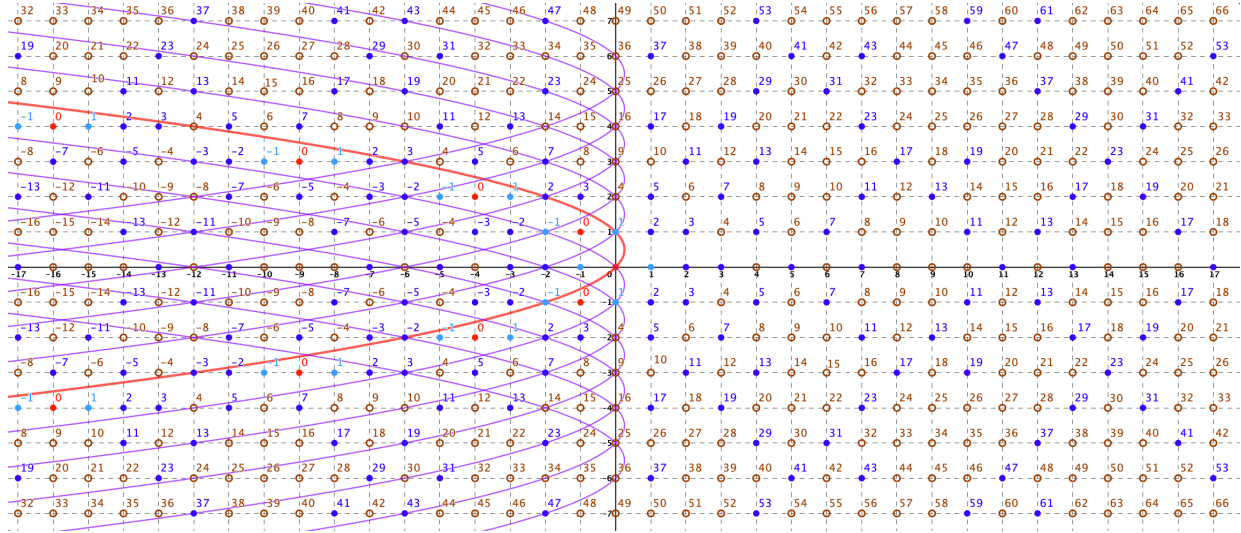


Figure 1. The D-Destroyer parabolas in column $x = 0$ of the lattice-grid $PS[x + 1, x, x + 1]$. They have offset following the staircase function with the step of a unit. These parabolas have equations in the XY plane of the form $x = -y^2 + Odd * y - Oblong$. In terms of the offset value: $x = -y^2 + (2f + 1)y - (f^2 + f)$.

Each parabola $x = -y^2 + (2f + 1)y - (f^2 + f)$ in lattice-grid $PS[x + 1, x, x + 1]$ will produce a quadratic sequence of the form $Y[y] = ay^2 + by + c$. Now, to determine the coefficients a, b, c , for each sequence we have to determine three consecutive elements.

Over each parabola, we can choose 3 consecutive elements from top to bottom or from bottom to top. Because we are synchronizing the y index with the Y-axis, we will choose 3 consecutive bottom-up elements which is the increasing index direction: $[Y[-1], Y[0], Y[1]]$.

The elements of row $y = -1$ in the new paraboctys will be noted as $@Y[-1]$.

The elements of row $y = 0$ in the new paraboctys will be noted as $@Y[0]$.

The elements of row $y = 1$ in the new paraboctys will be noted as $@Y[1]$.

So, let's create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]]$. This new paraboctys will contain all the sequences formed by the D-Destroyer parabolas with a variable offset in a vertical of lattice-grid $PS[x + 1, x, x + 1]$.

As we have D-Destroyer parabolas, we can understand each sequence as being made of one element of the vertical column $x = -2$ to assume the $@Y[-1]$ elements position and two elements of the vertical column $x = 0$ to assume the $@Y[0]$ and $@Y[1]$ elements positions.

Consequently,

- The elements on the vertical column $x = -2$ with offset $f = -1$ of the current paraboctys $PS[x + 1, x, x + 1]$ is:

$$A008865 \equiv [-2, -1, 2] \equiv @Y[-1] = x^2 + 2x - 1$$

- The elements on the vertical column $x = 0$ with offset $f = 0$ of the current paraboctys $PS[x + 1, x, x + 1]$ is:

$$A000290 \equiv [1, 0, 1] \equiv @Y[0] = x^2$$

- The elements on the vertical column $x = 0$ with offset $f = 1$ of the current paraboctys $PS[x + 1, x, x + 1]$ is:

$$A000290 \equiv [4, 1, 0] \equiv @Y[1] = x^2 - 2x + 1$$

Finally, we create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]] = PS[x^2 + 2x - 1, x^2, x^2 - 2x + 1]$:

Column-->	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
b	31	29	27	25	23	21	19	17	15	13	11	9	7	5	3	1	-1	-3	-5	-7	-9	-11	-13	-15	-17	-19	-21	-23	-25	-27	-29	
c	225	196	169	144	121	100	81	64	49	36	25	16	9	4	1	0	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225	
15	690	631	574	519	466	415	366	319	274	231	190	151	114	79	46	15	-14	-41	-66	-89	-110	-129	-146	-161	-174	-185	-194	-201	-206	-209	-210	
14	659	602	547	494	443	394	347	302	259	218	179	142	107	74	43	14	-13	-38	-61	-82	-101	-118	-133	-146	-157	-166	-173	-178	-181	-182	-181	
13	628	573	520	469	420	373	328	285	244	205	168	133	100	69	40	13	-12	-35	-56	-75	-92	-107	-120	-131	-140	-147	-152	-155	-156	-155	-152	
12	597	544	493	444	397	352	309	268	229	192	157	124	93	64	37	12	-11	-32	-51	-68	-83	-96	-107	-116	-123	-128	-131	-132	-131	-128	-123	
11	566	515	466	419	374	331	290	251	214	179	146	115	86	59	34	11	-10	-29	-46	-61	-74	-85	-94	-101	-106	-109	-110	-109	-106	-101	-94	
10	535	486	439	394	351	310	271	234	199	166	135	106	79	54	31	10	-9	-26	-41	-54	-65	-74	-81	-86	-89	-90	-89	-86	-81	-74	-65	
9	504	457	412	369	328	289	252	217	184	153	124	97	72	49	28	9	-8	-23	-36	-47	-56	-63	-68	-71	-72	-71	-68	-63	-56	-47	-36	
8	473	428	385	344	305	268	233	200	169	140	113	88	65	44	25	8	-7	-20	-31	-40	-47	-52	-55	-56	-55	-52	-47	-40	-31	-20	-7	
7	442	399	358	319	282	247	214	183	154	127	102	79	58	39	22	7	-6	-17	-26	-33	-38	-41	-42	-41	-38	-33	-26	-17	-6	7	22	
6	411	370	331	294	259	226	195	166	139	114	91	70	51	34	19	6	-5	-14	-21	-26	-29	-30	-29	-26	-21	-14	-5	6	19	34	51	
5	380	341	304	269	236	205	176	149	124	101	80	61	44	29	16	5	-4	-11	-16	-19	-20	-19	-16	-11	-4	5	16	29	44	61	80	
4	349	312	277	244	213	184	157	132	109	88	69	52	37	24	13	4	-3	-8	-11	-12	-11	-8	-3	4	13	24	37	52	69	88	109	
3	318	283	250	219	190	163	138	115	94	75	58	43	30	19	10	3	-2	-5	-6	-5	-2	3	10	19	30	43	58	75	94	115	138	
2	287	254	223	194	167	142	119	98	79	62	47	34	23	14	7	2	-1	-2	-1	2	7	14	23	34	47	62	79	98	119	142	167	
Y[1]	1	256	225	196	169	144	121	100	81	64	49	36	25	16	9	4	0	1	4	9	16	25	36	49	64	81	100	121	144	169	196	
Y[0]	0	225	196	169	144	121	100	81	64	49	36	25	16	9	4	1	0	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225
Y[-1]	-1	194	167	142	119	98	79	62	47	34	23	14	7	2	-1	-2	-1	2	7	14	23	34	47	62	79	98	119	142	167	194	223	254
-2	163	138	115	94	75	58	43	30	19	10	3	-2	-5	-6	-5	-2	3	10	19	30	43	58	75	94	115	138	163	190	219	250	283	
-3	132	109	88	69	52	37	24	13	4	-3	-8	-11	-12	-11	-8	-3	4	13	24	37	52	69	88	109	132	157	184	213	244	277	312	
-4	101	80	61	44	29	16	5	-4	-11	-16	-19	-20	-19	-16	-11	-4	5	16	29	44	61	80	101	124	149	176	205	236	269	304	341	
-5	70	51	34	19	6	-5	-14	-21	-26	-29	-30	-29	-26	-21	-14	-5	6	19	34	51	70	91	114	139	166	195	226	259	294	331	370	
-6	39	22	7	-6	-17	-26	-33	-38	-41	-42	-41	-38	-33	-26	-17	-6	7	22	39	58	79	102	127	154	183	214	247	282	319	358	399	
-7	8	-7	-20	-31	-40	-47	-52	-55	-56	-55	-52	-47	-40	-31	-20	-7	8	25	44	65	88	113	140	169	200	233	268	305	344	385	428	
-8	-23	-36	-47	-56	-63	-68	-71	-72	-71	-68	-63	-56	-47	-36	-23	-8	9	28	49	72	97	124	153	184	217	252	289	328	369	412	457	
-9	-54	-65	-74	-81	-86	-89	-90	-89	-86	-81	-74	-65	-54	-41	-26	-9	10	31	54	79	106	135	166	199	234	271	310	351	394	439	486	
-10	-85	-94	-101	-106	-109	-110	-109	-106	-101	-94	-85	-74	-61	-46	-29	-10	11	34	59	86	115	146	179	214	251	290	331	374	419	466	515	
-11	-116	-123	-128	-131	-132	-131	-128	-123	-116	-107	-96	-83	-68	-51	-32	-11	12	37	64	93	124	157	192	229	268	309	352	397	444	493	544	
-12	-147	-152	-155	-156	-155	-152	-147	-140	-131	-120	-107	-92	-75	-56	-35	-12	13	40	69	100	133	168	205	244	285	328	373	420	469	520	573	
-13	-178	-181	-182	-181	-178	-173	-166	-157	-146	-133	-118	-101	-82	-61	-38	-13	14	43	74	107	142	179	218	259	302	347	394	443	494	547	602	
-14	-209	-210	-209	-206	-201	-194	-185	-174	-161	-146	-129	-110	-89	-66	-41	-14	15	46	79	114	151	190	231	274	319	366	415	466	519	574	631	
-15	-240	-239	-236	-231	-224	-215	-204	-191	-176	-159	-140	-119	-96	-71	-44	-15	16	49	84	121	160	201	244	289	336	385	436	489	544	601	660	

Figure 1. Paraboctys $PS[x^2 + 2x - 1, x^2, x^2 - 2x + 1]$. The verticals represent the sequences produced by D-Destroyer parabolas with variable offset on the vertical $x = 0$ of the $PS[x + 1, x, x + 1]$. The D-Destroyer parabolas with positive offset produce the vertical sequences on the left side of this table. The D-Destroyer parabolas with negative offset produce the vertical sequences on the right side of this table.

4.3 The D-Submarine parabolas with a varying offset in $PS[x + 1, x, x + 1]$

See the picture:

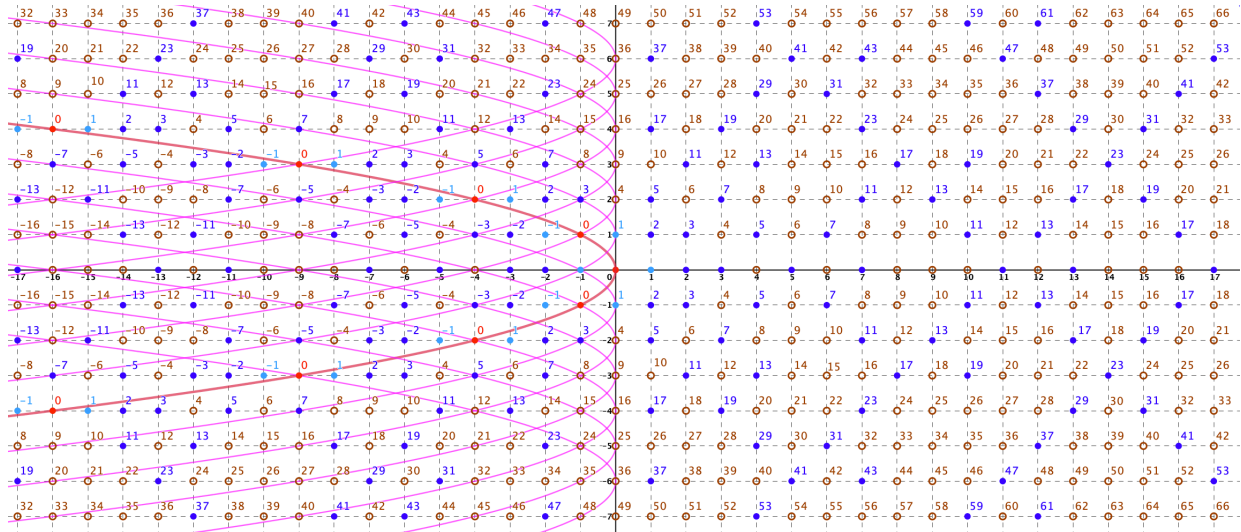


Figure 1. The D-Submarine parabolas in column $x = 0$ of the lattice-grid $PS[x + 1, x, x + 1]$. They have offset following the staircase function with the step of a unit. These parabolas have equations in the XY plane of the form $x = -y^2 + Even * y - Square$. In terms of the offset value $x = -y^2 + 2fy - f^2$.

Each parabola $x = -y^2 + 2fy - f^2$ in lattice-grid $PS[x + 1, x, x + 1]$ will produce a quadratic sequence of the form $Y[y] = ay^2 + by + c$. Now, to determine the coefficients a, b, c , for each sequence we have to determine three consecutive elements.

Over each parabola, we can choose 3 consecutive elements from top to bottom or from bottom to top. Because we are synchronizing the y index with the Y-axis, we will choose 3 consecutive bottom-up elements which is the increasing index direction: $[Y[-1], Y[0], Y[1]]$.

The elements of row $y = -1$ in the new paraboctys will be noted as $@Y[-1]$.

The elements of row $y = 0$ in the new paraboctys will be noted as $@Y[0]$.

The elements of row $y = 1$ in the new paraboctys will be noted as $@Y[1]$.

So, let's create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]]$. This new paraboctys will contain all the sequences formed by the D-Submarine parabolas with a variable offset in a vertical of lattice-grid $PS[x + 1, x, x + 1]$.

As we have D-Submarine parabolas, we can understand each sequence as being made of two elements of the vertical column $x = -1$ to assume the $@Y[-1]$ and $@Y[1]$ elements position and one element of the vertical column $x = 0$ to assume the $@Y[0]$ elements positions.

Consequently,

- 7. The elements on the vertical column $x = -1$ with offset $f = -1$ of the current paraboctys $PS[x + 1, x, x + 1]$ is:

$$A005563 \equiv [-1, 0, 3] \equiv @Y[-1] = x^2 + 2x$$

- 8. The elements on the vertical column $x = 0$ with offset $f = 0$ of the current paraboctys $PS[x + 1, x, x + 1]$ is:

$$A000290 \equiv [1, 0, 1] \equiv @Y[0] = x^2$$

- 9. The elements on the vertical column $x = -1$ with offset $f = 1$ of the current paraboctys $PS[x + 1, x, x + 1]$ is:

$$A005563 \equiv [3, 0, -1] \equiv @Y[1] = x^2 - 2x$$

Finally, we create the new paraboctys $PS[x^2 + 2x, x^2, x^2 - 2x]$:

Column ->	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
b	30	28	26	24	22	20	18	16	14	12	10	8	6	4	2	0	-2	-4	-6	-8	-10	-12	-14	-16	-18	-20	-22	-24	-26	-28	-30	
c	225	196	169	144	121	100	81	64	49	36	25	16	9	4	1	0	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225	
	15	675	616	559	504	451	400	351	304	259	216	175	136	99	64	31	0	-29	-56	-81	-104	-125	-144	-161	-176	-189	-200	-209	-216	-221	-224	-225
	14	645	588	533	480	429	380	333	288	245	204	165	128	93	60	29	0	-27	-52	-75	-96	-115	-132	-147	-160	-171	-180	-187	-192	-195	-196	-195
	13	615	560	507	456	407	360	315	272	231	192	155	120	87	56	27	0	-25	-48	-69	-88	-105	-120	-133	-144	-153	-160	-165	-168	-169	-168	-165
	12	585	532	481	432	385	340	297	256	217	180	145	112	81	52	25	0	-23	-44	-63	-80	-95	-108	-119	-128	-135	-140	-143	-144	-143	-140	-135
	11	555	504	455	408	363	320	279	240	203	168	135	104	75	48	23	0	-21	-40	-57	-72	-85	-96	-105	-112	-117	-120	-121	-120	-117	-112	-105
	10	525	476	429	384	341	300	261	224	189	156	125	96	69	44	21	0	-19	-36	-51	-64	-75	-84	-91	-96	-99	-100	-99	-96	-91	-84	-75
	9	495	448	403	360	319	280	243	208	175	144	115	88	63	40	19	0	-17	-32	-45	-56	-65	-72	-77	-80	-81	-80	-77	-72	-65	-56	-45
	8	465	420	377	336	297	260	225	192	161	132	105	80	57	36	17	0	-15	-28	-39	-48	-55	-60	-63	-64	-63	-60	-55	-48	-39	-28	-15
	7	435	392	351	312	275	240	207	176	147	120	95	72	51	32	15	0	-13	-24	-33	-40	-45	-48	-49	-48	-45	-40	-33	-24	-13	0	15
	6	405	364	325	288	253	220	189	160	133	108	85	64	45	28	13	0	-11	-20	-27	-32	-35	-36	-35	-32	-27	-20	-11	0	13	28	45
	5	375	336	299	264	231	200	171	144	119	96	75	56	39	24	11	0	-9	-16	-21	-24	-25	-24	-21	-16	-9	0	11	24	39	56	75
	4	345	308	273	240	209	180	153	128	105	84	65	48	33	20	9	0	-7	-12	-15	-16	-15	-12	-7	0	9	20	33	48	65	84	105
	3	315	280	247	216	187	160	135	112	91	72	55	40	27	16	7	0	-5	-8	-9	-8	-5	0	7	16	27	40	55	72	91	112	135
	2	285	252	221	192	165	140	117	96	77	60	45	32	21	12	5	0	-3	-4	-3	0	5	12	21	32	45	60	77	96	117	140	165
Y[1]	1	255	224	195	168	143	120	99	80	63	48	35	24	15	8	3	0	1	0	3	8	15	24	35	48	63	80	99	120	143	168	195
Y[0]	0	225	196	169	144	121	100	81	64	49	36	25	16	9	4	1	0	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225
Y[-1]	-1	195	168	143	120	99	80	63	48	35	24	15	8	3	0	-1	0	3	8	15	24	35	48	63	80	99	120	143	168	195	224	255
	-2	165	140	117	96	77	60	45	32	21	12	5	0	-3	-4	-3	0	5	12	21	32	45	60	77	96	117	140	165	192	221	252	285
	-3	135	112	91	72	55	40	27	16	7	0	-5	-8	-9	-8	-5	0	7	16	27	40	55	72	91	112	135	160	187	216	247	280	315
	-4	105	84	65	48	33	20	9	0	-7	-12	-15	-16	-15	-12	-7	0	9	20	33	48	65	84	105	128	153	180	209	240	273	308	345
	-5	75	56	39	24	11	0	-9	-16	-21	-24	-25	-24	-21	-16	-9	0	11	24	39	56	75	96	119	144	171	200	231	264	299	336	375
	-6	45	28	13	0	-11	-20	-27	-32	-35	-36	-35	-32	-27	-20	-11	0	13	28	45	64	85	108	133	160	189	220	253	288	325	364	405
	-7	15	0	-13	-24	-33	-40	-45	-48	-49	-48	-45	-40	-33	-24	-13	0	15	32	51	72	95	120	147	176	207	240	275	312	351	392	435
	-8	-15	-28	-39	-48	-55	-60	-63	-64	-63	-60	-55	-48	-39	-28	-15	0	17	36	57	80	105	132	161	192	225	260	297	336	377	420	465
	-9	-45	-56	-65	-72	-77	-80	-81	-80	-77	-72	-65	-56	-45	-32	-17	0	19	40	63	88	115	144	175	208	243	280	319	360	403	448	495
	-10	-75	-84	-91	-96	-99	-100	-99	-96	-91	-84	-75	-64	-51	-36	-19	0	21	44	69	96	125	156	189	224	261	300	341	384	429	476	525
	-11	-105	-112	-117	-120	-121	-120	-117	-112	-105	-96	-85	-72	-57	-40	-23	0	23	48	75	104	135	168	203	240	279	320	363	408	455	504	555
	-12	-135	-140	-143	-144	-143	-140	-135	-128	-119	-108	-95	-80	-63	-44	-23	0	25	52	81	112	145	180	217	256	297	340	385	432	481	532	585
	-13	-165	-168	-169	-168	-165	-160	-153	-144	-133	-120	-105	-88	-69	-48	-25	0	27	56	87	120	155	192	231	272	315	360	407	456	507	560	615
	-14	-195	-196	-195	-192	-187	-180	-171	-160	-147	-132	-115	-96	-75	-52	-27	0	29	60	93	128	165	204	245	288	333	380	429	480	533	588	645
	-15	-225	-224	-221	-216	-209	-200	-189	-176	-161	-144	-125	-104	-81	-56	-29	0	31	64	99	136	175	216	259	304	351	400	451	504	559	616	675

Figure 1. Paraboctys $PS[x^2 + 2x, x^2, x^2 - 2x]$. The verticals represent the sequences produced by D-Submarine parabolas with variable offset on the vertical $x = 0$ of the $PS[x + 1, x, x + 1]$.

The D-Submarine parabolas with positive offset produce the vertical sequences on the left side of this table. The D-Submarine parabolas with negative offset produce the vertical sequences on the right side of this table.

Simplifying all verticals for offset $f = 0$:

Column-->	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Classif.	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	SUB	
y_{ip}^*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
P^*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
a^*	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
b^*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c^*	-225	-196	-169	-144	-121	-100	-81	-64	-49	-36	-25	-16	-9	-4	-1	0	-1	-4	-9	-16	-25	-36	-49	-64	-81	-100	-121	-144	-169	-196	-225	
15	0	29	56	81	104	125	144	161	176	189	200	209	216	221	224	225	224	221	216	209	200	189	176	161	144	125	104	81	56	29	0	
14	-29	0	27	52	75	96	115	132	147	160	171	180	187	192	195	196	195	192	187	180	171	160	147	132	115	96	75	52	27	0	-29	
13	-56	-27	0	25	48	69	88	105	120	133	144	153	160	165	168	169	168	165	160	153	144	133	120	105	88	69	48	25	0	-27	-56	
12	-81	-52	-25	0	23	44	63	80	95	108	119	128	135	140	143	144	143	140	135	128	119	108	95	80	63	44	23	0	-25	-52	-81	
11	-104	-75	-48	-23	0	21	40	57	72	85	96	105	112	117	120	121	120	117	112	105	96	85	72	57	40	21	0	-23	-48	-75	-104	
10	-125	-96	-69	-44	-21	0	19	36	51	64	75	84	91	96	99	100	99	96	91	84	75	64	51	36	19	0	-21	-44	-69	-96	-125	
9	-144	-115	-88	-63	-40	-19	0	17	32	45	56	65	72	77	80	81	80	77	72	65	56	45	32	17	0	-19	-40	-63	-88	-115	-144	
8	-161	-132	-105	-80	-57	-36	-17	0	15	28	39	48	55	60	63	64	63	60	55	48	39	28	15	0	-17	-36	-57	-80	-105	-132	-161	
7	-176	-147	-120	-95	-72	-51	-32	-15	0	13	24	33	40	45	48	49	48	45	40	33	24	13	0	-15	-32	-51	-72	-95	-120	-147	-176	
6	-189	-160	-133	-108	-85	-64	-45	-28	-13	0	11	20	27	32	35	36	35	32	27	20	11	0	-13	-28	-45	-64	-85	-108	-133	-160	-189	
5	-200	-171	-144	-119	-96	-75	-56	-39	-24	-11	0	9	16	21	24	25	24	21	16	9	0	-11	-24	-39	-56	-75	-96	-119	-144	-171	-200	
4	-209	-180	-153	-128	-105	-84	-65	-48	-33	-20	-9	0	7	12	15	16	15	12	7	0	-9	-20	-33	-48	-65	-84	-105	-128	-153	-180	-209	
3	-216	-187	-160	-135	-112	-91	-72	-55	-40	-27	-16	-7	0	5	8	9	8	5	0	-7	-16	-27	-40	-55	-72	-91	-112	-135	-160	-187	-216	
2	-221	-192	-165	-140	-117	-96	-77	-60	-45	-32	-21	-12	-5	0	3	4	3	0	-5	-12	-21	-32	-45	-60	-77	-96	-117	-140	-165	-192	-221	
Y[1]	-224	-195	-168	-143	-120	-99	-80	-63	-48	-35	-24	-15	-8	-3	0	0	-3	-8	-15	-24	-35	-48	-63	-80	-99	-120	-143	-168	-195	-224		
Y[0]	0	-225	-196	-169	-144	-121	-100	-81	-64	-49	-36	-25	-16	-9	-4	-1	0	-1	-4	-9	-16	-25	-36	-49	-64	-81	-100	-121	-144	-169	-196	-225
Y(-1)	-1	-224	-195	-168	-143	-120	-99	-80	-63	-48	-35	-24	-15	-8	-3	0	0	-3	-8	-15	-24	-35	-48	-63	-80	-99	-120	-143	-168	-195	-224	
-2	-221	-192	-165	-140	-117	-96	-77	-60	-45	-32	-21	-12	-5	0	3	4	3	0	-5	-12	-21	-32	-45	-60	-77	-96	-117	-140	-165	-192	-221	
-3	-216	-187	-160	-135	-112	-91	-72	-55	-40	-27	-16	-7	0	5	8	9	8	5	0	-7	-16	-27	-40	-55	-72	-91	-112	-135	-160	-187	-216	
-4	-209	-180	-153	-128	-105	-84	-65	-48	-33	-20	-9	0	7	12	15	16	15	12	7	0	-9	-20	-33	-48	-65	-84	-105	-128	-153	-180	-209	
-5	-200	-171	-144	-119	-96	-75	-56	-39	-24	-11	0	9	16	21	24	25	24	21	16	9	0	-11	-24	-39	-56	-75	-96	-119	-144	-171	-200	
-6	-189	-160	-133	-108	-85	-64	-45	-28	-13	0	11	20	27	32	35	36	35	32	27	20	11	0	-13	-28	-45	-64	-85	-108	-133	-160	-189	
-7	-176	-147	-120	-95	-72	-51	-32	-15	0	13	24	33	40	45	48	49	48	45	40	33	24	13	0	-15	-32	-51	-72	-95	-120	-147	-176	
-8	-161	-132	-105	-80	-57	-36	-17	0	15	28	39	48	55	60	63	64	63	60	55	48	39	28	15	0	-17	-36	-57	-80	-105	-132	-161	
-9	-144	-115	-88	-63	-40	-19	0	17	32	45	56	65	72	77	80	81	80	77	72	65	56	45	32	17	0	-19	-40	-63	-88	-115	-144	
-10	-125	-96	-69	-44	-21	0	19	36	51	64	75	84	91	96	99	100	99	96	91	84	75	64	51	36	19	0	-21	-44	-69	-96	-125	
-11	-104	-75	-48	-23	0	21	40	57	72	85	96	105	112	117	120	121	120	117	112	105	96	85	72	57	40	21	0	-23	-48	-75	-104	
-12	-81	-52	-25	0	23	44	63	80	95	108	119	128	135	140	143	144	143	140	135	128	119	108	95	80	63	44	23	0	-25	-52	-81	
-13	-56	-27	0	25	48	69	88	105	120	133	144	153	160	165	168	169	168	165	160	153	144	133	120	105	88	69	48	25	0	-27	-56	
-14	-29	0	27	52	75	96	115	132	147	160	171	180	187	192	195	196	195	192	187	180	171	160	147	132	115	96	75	52	27	0	-29	
-15	0	29	56	81	104	125	144	161	176	189	200	209	216	221	224	225	224	221	216	209	200	189	176	161	144	125	104	81	56	29	0	

Figure 1. Paraboctys $PS[-x^2 + 1, -x^2, -x^2 + 1]$. All verticals of Paraboctys $PS[2x + 1, 0, -2x + 1]$ in offset $f = 0$.

4.4 The D-Destroyer and D-Submarine interleaving parabolas with a varying offset in $PS[x + 1, x, x + 1]$

See the picture

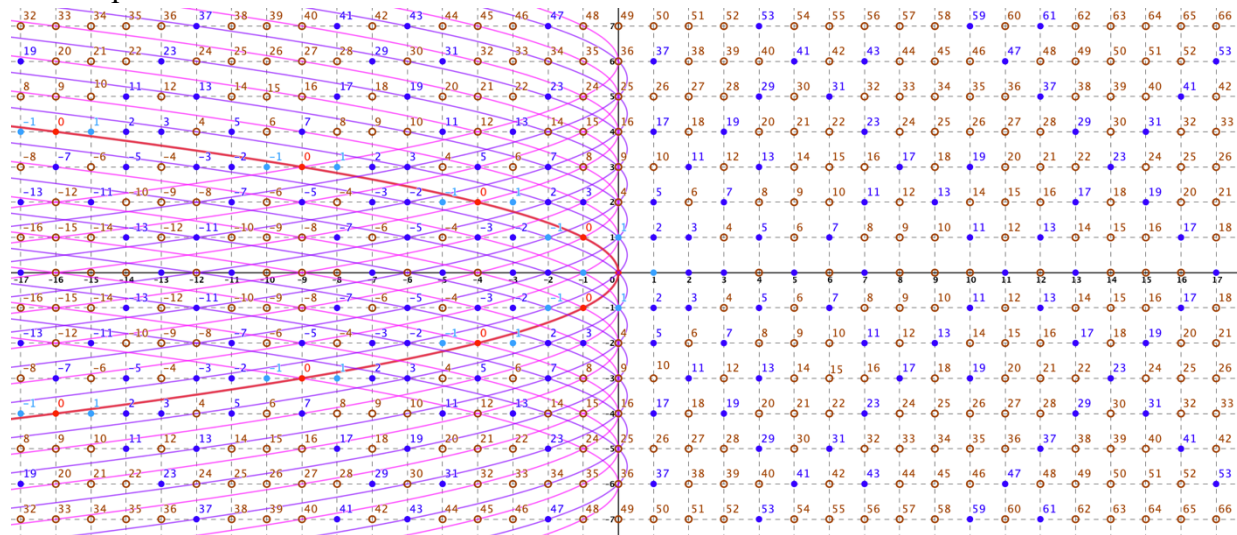


Figure 1. The combined D-Destroyers and D-Submarines parabolas in column $x = 0$ of the lattice-grid $PS[x + 1, x, x + 1]$. They have offset following the staircase function with the step of a unit.

Columns ->	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b	17	14	15	12	13	10	11	8	9	6	7	4	5	2	3	0	1	-2	-1	-4	-3	-6	-5	-8	-7	-10	-9	-12	-11	-14	-13	
c	64	49	49	36	36	25	25	16	16	9	9	4	4	1	1	0	0	1	1	4	4	9	9	16	16	25	25	36	36	49	49	
15	319	259	274	216	231	175	190	136	151	99	114	64	79	31	46	0	15	-29	-14	-56	-41	-81	-66	-104	-89	-125	-110	-144	-129	-161	-146	
14	302	245	259	204	218	165	179	128	142	93	107	60	74	29	43	0	14	-27	-13	-52	-38	-75	-61	-96	-82	-115	-101	-132	-118	-147	-133	
13	285	231	244	192	205	155	168	120	133	87	100	56	69	27	40	0	13	-25	-12	-48	-35	-69	-56	-88	-75	-105	-92	-120	-107	-133	-120	
12	268	217	229	180	192	145	157	112	124	81	93	52	64	25	37	0	12	-23	-11	-44	-32	-63	-51	-80	-68	-95	-83	-108	-96	-119	-107	
11	251	203	214	168	179	135	146	104	115	75	86	48	59	23	34	0	11	-21	-10	-40	-29	-57	-46	-72	-61	-85	-74	-96	-85	-105	-94	
10	234	189	199	156	166	125	135	96	106	69	79	44	54	21	31	0	10	-19	-9	-36	-26	-51	-41	-64	-54	-75	-65	-84	-74	-91	-81	
9	217	175	184	144	153	115	124	88	97	63	72	40	49	19	28	0	9	-17	-8	-32	-23	-45	-36	-56	-47	-65	-56	-72	-63	-77	-68	
8	200	161	169	132	140	105	113	80	88	57	65	36	44	17	25	0	8	-15	-7	-28	-20	-39	-31	-48	-40	-55	-47	-60	-52	-63	-55	
7	183	147	154	120	127	95	102	72	79	51	58	32	39	15	22	0	7	-13	-6	-24	-17	-33	-26	-40	-33	-45	-38	-48	-41	-49	-42	
6	166	133	134	108	114	85	91	64	70	45	51	28	34	13	19	0	6	-11	-5	-20	-14	-27	-21	-32	-26	-35	-29	-36	-30	-35	-29	
5	149	119	129	96	101	75	80	56	61	39	44	24	29	11	16	0	5	-9	-4	-16	-11	-21	-16	-24	-19	-25	-20	-24	-19	-21	-16	
4	132	105	109	84	88	65	69	48	52	33	37	20	24	9	13	0	4	-7	-3	-12	-8	-15	-11	-16	-12	-15	-11	-12	-8	-7	-3	0
3	115	91	94	72	75	55	58	40	43	27	30	16	19	7	10	0	3	-5	-2	-8	-5	-9	-6	-8	-5	-7	-4	-5	-3	-7	10	
2	98	77	79	60	62	45	47	32	34	21	23	12	14	5	7	0	2	-3	-1	-4	-2	-3	-1	-4	-2	-5	-2	-4	7	10	23	
Y[1]	1	81	63	64	48	49	35	36	24	25	15	16	8	9	3	4	0	1	3	2	8	7	15	14	24	23	35	34	48	47	63	62
Y[0]	0	64	49	49	36	36	25	25	16	16	9	9	4	4	1	1	0	1	1	4	4	9	9	16	16	25	25	36	36	49	49	
Y[-1]	-1	47	35	34	24	23	15	14	8	7	3	2	0	4	1	1	0	1	1	4	4	9	9	16	16	25	25	36	36	49	49	
-2	30	21	19	12	10	5	3	0	-2	-3	-5	-4	-6	-3	-5	0	-2	5	3	12	10	21	19	32	30	45	43	60	58	77	75	
-3	13	7	4	0	-3	-5	-8	-8	-11	-9	-12	-8	-11	-5	-8	0	-3	7	4	16	13	27	24	40	37	55	52	72	69	91	88	
-4	-4	-7	-11	-12	-16	-15	-19	-16	-20	-15	-19	-12	-16	-7	-11	0	-4	9	5	20	16	33	29	48	44	65	61	84	80	105	101	
-5	-21	-21	-26	-24	-29	-25	-30	-24	-29	-21	-26	-16	-21	-9	-14	0	-5	11	6	24	19	39	34	56	51	75	70	96	91	119	114	
-6	-38	-35	-41	-36	-42	-35	-41	-32	-38	-27	-33	-20	-26	-11	-17	0	-6	13	7	28	22	45	39	64	58	85	79	108	102	133	127	
-7	-55	-49	-56	-48	-55	-45	-52	-40	-47	-33	-40	-24	-31	-13	-20	0	-7	15	8	32	25	51	44	72	65	95	88	120	113	147	140	
-8	-72	-63	-71	-60	-68	-55	-63	-48	-56	-39	-47	-28	-36	-15	-23	0	-8	17	9	36	28	57	49	80	72	105	97	132	124	161	153	
-9	-89	-77	-86	-72	-81	-65	-74	-56	-65	-45	-54	-32	-41	-17	-26	0	-9	19	10	40	31	63	54	88	79	115	106	144	135	175	166	
-10	-106	-91	-101	-84	-94	-75	-85	-64	-74	-51	-61	-36	-46	-19	-29	0	-10	21	11	44	34	69	59	96	86	125	115	156	146	189	179	
-11	-123	-105	-116	-96	-107	-85	-96	-72	-83	-57	-68	-40	-51	-21	-32	0	-11	23	12	48	37	75	64	104	93	135	124	168	157	203	192	
-12	-140	-119	-131	-108	-120	-95	-107	-80	-92	-63	-75	-44	-56	-23	-35	0	-12	25	13	52	40	81	69	112	100	145	133	180	168	217	205	
-13	-157	-133	-146	-120	-133	-105	-118	-88	-101	-69	-82	-48	-61	-25	-38	0	-13	27	14	56	43	87	74	120	107	155	142	192	179	231	218	
-14	-174	-147	-161	-132	-146	-115	-129	-96	-110	-75	-89	-52	-66	-27	-41	0	-14	29	15	60	46	93	79	128	114	165	151	204	190	245	231	
-15	-191	-161	-176	-144	-159	-125	-140	-104	-119	-81	-96	-56	-71	-29	-44	0	-15	31	16	64	49	99	84	136	121	175	160	216	201	259	244	

Figure 1. The combined D-Destroyers and D-Submarines parabolas in $PS[x + 1, x, x + 1]$.

		CENTER					
		-2	-1	0	1	2	3
Y[1]	1	3	4	0	1	-1	0
Y[0]	0	1	1	0	0	1	1
Y[-1]	-1	-1	-2	0	-1	3	2

Figure 1. The center of the combined D-Destroyers and D-Submarines parabolas in table $PS[x + 1, x, x + 1]$.

4.4.1 The row $Y[-1] = X_{-1}[x]$

The center of the row $Y[-1] \equiv \{\dots, -1, -2, 0, -1, 3, 2, \dots\}$.

The row $Y[-1]$ is the result of the interlacing between two quadratics:

$$Y[-1] = X_1[x = \text{even}] + X_1[x = \text{Odd}]$$

$X_1[x = \text{Even}]$ is based on sequence $[-1, 0, 3] = n^2 + 2n \equiv A005563$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_1[x = \text{Even}] \equiv A00005050603 \equiv [-1, 0, 0, 3, 0] \equiv \left(\frac{x}{2}\right)^2 + x = \frac{x^2 + 4x}{4} = 0.25x^2 + x$$

$$\equiv \frac{A028347}{4} \equiv [-0.75, -1, -0.75] = \frac{x^2 - 2^2}{2^2} @f = 0$$

AXXXXXX

$\equiv \{\dots, 0, 63, 0, 48, 0, 35, 0, 24, 0, 15, 0, 8, 0, 3, 0, 0, 0, -1, 0, 0, 0, 3, 0, 8, 0, 15, 0, 24, 0, 35, 0, \dots\}$

and

$X_1[x = \text{Odd}]$ is based on sequence $[-2, -1, 2] = n^2 + 2n - 1 \equiv A008865$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_1[x = \text{Odd}] \equiv A00008080605 \equiv [-2, 0, -1, 0, 2, 0] = \left(\frac{x + 1}{2}\right)^2 + \frac{2(x + 1)}{2} - 1$$

$$= \frac{x^2 + 2x + 1 + 4x + 4 - 4}{4} = \frac{x^2 + 6x + 1}{4} = 0.25x^2 + 1.5x + 0.25$$

$$\equiv \frac{A028884}{4} \equiv [-1.75, -2, -1.75] = \frac{x^2 - (\sqrt{8})^2}{2^2} @f = 0$$

AXXXXXX

$\equiv \{\dots, 79, 0, 62, 0, 47, 0, 34, 0, 23, 0, 14, 0, 7, 0, 2, 0, -1, 0, -2, 0, -1, 0, 2, 0, 7, 0, 14, 0, 23, 0, 34, \dots\}$

$$X_1[-x = \text{Even}] = \frac{x^2 + 4x}{4} \equiv \frac{A028347}{4}$$

$$X_1[-x = \text{Odd}] = \frac{x^2 + 6x + 1}{4} \equiv \frac{A028884}{4}$$

$$X_1[-x] = X_1[-x = \text{even}] + X_1[-x = \text{Odd}]$$

$$X_1[-x] = \frac{x^2 + (5x - x(-1)^x) + (0.5 - 0.5(-1)^x)}{4}$$

$$X_1[-x] = \frac{x^2 + 5x + 0.5 - (x + 0.5)(-1)^x}{4}$$

$$X_1[-x] = \frac{2x^2 + 10x + 1 - (2x + 1)(-1)^x}{8}$$

Process table to produce the row Y[-1]							
Classif.	SUB	SUB	X1[Even]	SUB	SUB	X1[Odd]	X1 = X1[Even] + X1[Odd]
y_lp	-1	-2		-1	-3		
f	-1	-2		-1	-3		
	A005563	X1[Even]		A008865	X1[Odd]		
a	1	0,25		1	0,25		
b	2	1		2	1,5		
c	0	0	AXXXXXX	-1	0,25	AXXXXXX	AXXXXXX
15	255	71,25	0	254	79	79	79
14	224	63	63	223	70,25	0	63
13	195	55,25	0	194	62	62	62
12	168	48	48	167	54,25	0	48
11	143	41,25	0	142	47	47	47
10	120	35	35	119	40,25	0	35
9	99	29,25	0	98	34	34	34
8	80	24	24	79	28,25	0	24
7	63	19,25	0	62	23	23	23
6	48	15	15	47	18,25	0	15
5	35	11,25	0	34	14	14	14
4	24	8	8	23	10,25	0	8
3	15	5,25	0	14	7	7	7
2	8	3	3	7	4,25	0	3
Y[1]	1	3	1,25	2	2	2	2
Y[0]	0	0	0	-1	0,25	0	0
Y[-1]	-1	-1	-0,75	-2	-1	-1	-1
-2	0	-1	-1	-1	-1,75	0	-1
-3	3	-0,75	0	2	-2	-2	-2
-4	8	0	0	7	-1,75	0	0
-5	15	1,25	0	14	-1	-1	-1
-6	24	3	3	23	0,25	0	3
-7	35	5,25	0	34	2	2	2
-8	48	8	8	47	4,25	0	8
-9	63	11,25	0	62	7	7	7
-10	80	15	15	79	10,25	0	15
-11	99	19,25	0	98	14	14	14
-12	120	24	24	119	18,25	0	24
-13	143	29,25	0	142	23	23	23
-14	168	35	35	167	28,25	0	35
-15	195	41,25	0	194	34	34	34

Figure 1. Sequence Axxxxxx is the row Y[-1] of the combined D-Destroyers and D-Submarines parabolas in $PS[x + 1, x, x + 1]$. Because of the interlacing, the direction of the final sequence is reversed.

The row Y[-1] Axxxxxx is the Interleaving of A008865 (Square minus Two) numbers and A005563 (Square minus one) numbers. {..., 195, 194, 168, 167, 143, 142, 120, 119, 99, 98, 80, 79, 63, 62, 48, 47, 35, 34, 24, 23, 15, 14, 8, 7, 3, 2, 0, -1, -1, -2, 0, -1, 3, 2, 8, 7, 15, 14, 24, 23, 35, 34, 48, 47, 63, 62, 80, 79, 99, 98, 120, 119, 143, 142, 168, 167, 195, 194, 224, 223, 255, 254, ...}.

4.4.2 The row $Y[0] = X_2[x]$

The center of the row $Y[0] \equiv \{\dots, 1, 1, 0, 0, 1, 1, \dots\}$.

The row $Y[0]$ is the result of the interlacing between two quadratics:

$$Y[0] = X_2[x = \text{even}] + X_2[x = \text{Odd}]$$

$X_2[x = \text{Even}]$ is based on sequence $[1, 0, 1] = n^2 \equiv A000290 \equiv n(n \pm 0)$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_2[x = \text{Even}] \equiv A000290 \equiv [1, 0, 1] \equiv \left(\frac{x}{2}\right)^2 = \frac{x^2}{4} = 0.25x^2 \equiv \frac{A000290}{4}$$

$$\equiv [0.25, 0, 0.25] = \frac{x^2}{2^2} @f = 0$$

$AXXXXXX \equiv \{\dots, 0, 49, 0, 36, 0, 25, 0, 16, 0, 9, 0, 4, 0, 1, 0, 0, 0, 1, 0, 4, 0, 9, 0, 16, 0, 25, 0, 36, 0, 49, 0, \dots\}$

and

$X_2[x = \text{Odd}]$ is based on sequence $[1, 0, 1] = n^2 \equiv A000290 \equiv n(n \pm 0)$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_2[x = \text{Odd}] \equiv A000290 \equiv [0, 1, 0, 1] = \left(\frac{x + 1}{2}\right)^2 = \frac{x^2 + 2x + 1}{4}$$

$$= 0.25x^2 + 0.5x + 0.25 \equiv \frac{A000290}{4} \equiv [0.25, 0, 0.25] = \frac{x^2}{2^2} @f = 0$$

$AXXXXXX \equiv \{\dots, 64, 0, 49, 0, 36, 0, 25, 0, 16, 0, 9, 0, 4, 0, 1, 0, 0, 0, 1, 0, 4, 0, 9, 0, 16, 0, 25, 0, 36, 0, 49, \dots\}$

$$X_2[-x = \text{Even}] = \frac{x^2}{4} \equiv \frac{A000290}{4}$$

$$X_2[-x = \text{Odd}] = \frac{x^2 + 2x + 1}{4} \equiv \frac{A000290}{4}$$

$$X_2[-x] = X_2[-x = \text{even}] + X_2[-x = \text{Odd}]$$

$$X_2[-x] = \frac{x^2 + (x - x(-1)^x) + (0.5 - 0.5(-1)^x)}{4}$$

$$X_2[-x] = \frac{x^2 + x + 0.5 - (x + 0.5)(-1)^x}{4}$$

$$X_2[-x] = \frac{2x^2 + 2x + 1 - (2x + 1)(-1)^x}{8}$$

Process table to produce the row Y[0]							
Classif.	SUB	SUB		SUB	SUB		
y_ip	0	0		0	-1		X2 =
f	0	0		0	-1		X2[Even]
	A000290	X2[Even]	X2[Even]	A000290	X2[Odd]	X2[Odd]	+ X2[Odd]
a	1	0,25		1	0,25		
b	0	0		0	0,5		
c	0	0	AXXXXXX	0	0,25	AXXXXXX	A008794
15	225	56,25	0	225	64	64	64
14	196	49	49	196	56,25	0	49
13	169	42,25	0	169	49	49	49
12	144	36	36	144	42,25	0	36
11	121	30,25	0	121	36	36	36
10	100	25	25	100	30,25	0	25
9	81	20,25	0	81	25	25	25
8	64	16	16	64	20,25	0	16
7	49	12,25	0	49	16	16	16
6	36	9	9	36	12,25	0	9
5	25	6,25	0	25	9	9	9
4	16	4	4	16	6,25	0	4
3	9	2,25	0	9	4	4	4
2	4	1	1	4	2,25	0	1
Y[1]	1	1	0,25	0	1	1	1
Y[0]	0	0	0	0	0,25	0	0
Y[-1]	-1	1	0,25	0	1	0	0
-2	4	1	1	4	0,25	0	1
-3	9	2,25	0	9	1	1	1
-4	16	4	4	16	2,25	0	4
-5	25	6,25	0	25	4	4	4
-6	36	9	9	36	6,25	0	9
-7	49	12,25	0	49	9	9	9
-8	64	16	16	64	12,25	0	16
-9	81	20,25	0	81	16	16	16
-10	100	25	25	100	20,25	0	25
-11	121	30,25	0	121	25	25	25
-12	144	36	36	144	30,25	0	36
-13	169	42,25	0	169	36	36	36
-14	196	49	49	196	42,25	0	49
-15	225	56,25	0	225	49	49	49

Figure 1. Sequence A008794 is the row Y[0] of the combined D-Destroyers and D-Submarines parabolas in $PS[x + 1, x, x + 1]$.

The row Y[0] is the A008794 Squares repeated; $a(n) = \text{floor}(n/2)^2$. $\{\dots, 225, 225, 196, 196, 169, 169, 144, 144, 121, 121, 100, 100, 81, 81, 64, 64, 49, 49, 36, 36, 25, 25, 16, 16, 9, 9, 4, 4, 1, 1, 0, 0, 1, 1, 4, 4, 9, 9, 16, 16, 25, 25, 36, 36, 49, 49, 64, 64, 81, 81, 100, 100, 121, 121, 144, 144, 169, 169, 196, 196, 225, 225, \dots\}$.

4.4.3 The row $Y[1] = X_3[x]$

The center of the row $Y[1] \equiv \{\dots, 3, 4, 0, 1, -1, 0, \dots\}$.

The row $Y[1]$ is the result of the interlacing between two quadratics:

$$Y[1] = X_3[x = \text{even}] + X_3[x = \text{Odd}]$$

$X_3[x = \text{Even}]$ is based on sequence $[3, 0, -1] = n^2 - 2n \equiv A005563 \equiv n(n - 2)$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_3[x = \text{Even}] \equiv A00005050603 \equiv [3, 0, 0, 0, -1, 0] \equiv \left(\frac{x}{2}\right)^2 - x = \frac{x^2 - 4x}{4} = 0.25x^2 - x$$

$$\equiv \frac{A028347}{4} \equiv [-0.75, -1, -0.75] = \frac{x^2 - 2^2}{2^2} @f = 0$$

AXXXXXX

$\equiv \{\dots, 0, 35, 0, 24, 0, 15, 0, 8, 0, 3, 0, 0, 0, -1, 0, 0, 0, 3, 0, 8, 0, 15, 0, 24, 0, 35, 0, 48, 0, 63, 0, \dots\}$

and

$X_3[x = \text{Odd}]$ is based on sequence $[4, 1, 0] = n^2 - 2n + 1 \equiv A000290$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_3[x = \text{Odd}] \equiv A000020900 \equiv [0, 4, 0, 1, 0, 0] = \left(\frac{x + 1}{2}\right)^2 - x - 1 + 1$$

$$= \frac{x^2 + 2x + 1 - 4x}{4} = \frac{x^2 - 2x + 1}{4} = 0.25x^2 - 0.5x + 0.25 \equiv \frac{A000290}{4}$$

$$\equiv [0.25, 0, 0.25] = \frac{x^2}{2^2} @f = 0$$

AXXXXXX

$\equiv \{\dots, 49, 0, 36, 0, 25, 0, 16, 0, 9, 0, 4, 0, 1, 0, 0, 0, 1, 0, 4, 0, 9, 0, 16, 0, 25, 0, 36, 0, 49, 0, 64, \dots\}$

$$X_3[-x = \text{Even}] = \frac{x^2 - 4x}{4} \equiv \frac{A028347}{4}$$

$$X_3[-x = \text{Odd}] = \frac{x^2 - 2x + 1}{4} \equiv \frac{A000290}{4}$$

$$X_3[-x] = X_3[-x = \text{even}] + X_3[-x = \text{Odd}]$$

$$X_3[-x] = \frac{x^2 - (3x - x(-1)^x) + (0.5 - 0.5(-1)^x)}{4}$$

$$X_3[x] = \frac{x^2 - 3x + 0.5 + (x - 0.5)(-1)^x}{4}$$

$$X_3[-x] = \frac{2x^2 - 6x + 1 + (2x - 1)(-1)^x}{8}$$

Process table to produce the row Y[1]							
Classif.	SUB	SUB		SUB	SUB		
y_ip	1	2	X3[Even]	1	1	X3[Odd]	X3 = X3[Even] + X3[Odd]
f	1	2		A005563	X3[Odd]		
a	1	0,25		A000290	X3[Odd]		
b	-2	-1					
c	0	0	AXXXXXX	1	0,25	AXXXXXX	A135276
15	195	41,25	0	196	49	49	49
14	168	35	35	169	42,25	0	35
13	143	29,25	0	144	36	36	36
12	120	24	24	121	30,25	0	24
11	99	19,25	0	100	25	25	25
10	80	15	15	81	20,25	0	15
9	63	11,25	0	64	16	16	16
8	48	8	8	49	12,25	0	8
7	35	5,25	0	36	9	9	9
6	24	3	3	25	6,25	0	3
5	15	1,25	0	16	4	4	4
4	8	0	0	9	2,25	0	0
3	3	-0,75	0	4	1	1	1
2	0	-1	-1	1	0,25	0	-1
Y[1]	1	-1	-0,75	0	0	0	0
Y[0]	0	0	0	1	0,25	0	0
Y[-1]	-1	3	1,25	0	4	1	1
-2	8	3	3	9	2,25	0	3
-3	15	5,25	0	16	4	4	4
-4	24	8	8	25	6,25	0	8
-5	35	11,25	0	36	9	9	9
-6	48	15	15	49	12,25	0	15
-7	63	19,25	0	64	16	16	16
-8	80	24	24	81	20,25	0	24
-9	99	29,25	0	100	25	25	25
-10	120	35	35	121	30,25	0	35
-11	143	41,25	0	144	36	36	36
-12	168	48	48	169	42,25	0	48
-13	195	55,25	0	196	49	49	49
-14	224	63	63	225	56,25	0	63
-15	255	71,25	0	256	64	64	64

Figure 1. Sequence A135276 and \A131805\ is the row Y[1] of the combined D-Destroyers and D-Submarines parabolas in $PS[x + 1, x, x + 1]$.

The row Y[1] is the Interleaving of A000290 Square numbers and A005563 (Square minus one) numbers. $Y[1] \equiv \backslash A131805 \backslash + A135276 \equiv \{ \dots, 255, 256, 224, 225, 195, 196, 168, 169, 143, 144, 120, 121, 99, 100, 80, 81, 63, 64, 48, 49, 35, 36, 24, 25, 15, 16, 8, 9, 3, 4, 0, 1, -1, 0, 0, 1, 3, 4, 8, 9, 15, 16, 24, 25, 35, 36, 48, 49, 63, 64, 80, 81, 99, 100, 120, 121, 143, 144, 168, 169, 195, 196, 224, 225, 255, 256, 288, 289, 323, 324, 360, 361, 399, 400, 440, 441, 483, 484, 528, 529, 575, 576, 624, 625, 675, 676, 728, 729, 783, 784, 840, 841, 899, 900, 960, 961, \dots \}$.

A131805 Row sums of triangular array T: $T(j,k) = -(k+1)/2$ for odd k, $T(j,k) = 0$ for k = 0, $T(j,k) = j+1-k/2$ for even k > 0; $0 \leq k \leq j$.

$\{0, -1, 1, 0, 4, 3, 9, 8, 16, 15, 25, 24, 36, 35, 49, 48, 64, 63, 81, 80, 100, 99, 121, 120, \dots\}$.

Interleaving of A000290 and A067998 (starting at second term).

First differences are -1, 2, -1, 4, -1, 6, -1, 8, -1, 10, ...: $a(n+1) - a(n) = (-1)^{(n+1)} * A124625(n+2)$.

The main diagonal of T is in A001057, antidiagonal sums are in A131804.

First seven rows of T are

- [0],
- [0, -1],
- [0, -1, 2],
- [0, -1, 3, -2],
- [0, -1, 4, -2, 3],

[0, -1, 5, -2, 4, -3],

[0, -1, 6, -2, 5, -3, 4]

A135276 $a(0)=0, a(1)=1; \text{ for } n>1, a(n) = a(n-1) + n^0 \text{ if } n \text{ odd, } a(n) = a(n-1) + n^1 \text{ if } n \text{ is even.}$

{ 0, 1, 3, 4, 8, 9, 15, 16, 24, 25, 35, 36, 48, 49, 63, 64, 80, 81, 99, 100, 120, 121, 143, 144, ... }.

Figure 1. The $PS[x + 2, x, x + 2]$ in the table form.

5.2 The C-Destroyer parabolas with variable offset on a vertical of $PS[x + 1, x, x + 1]$

See the picture:

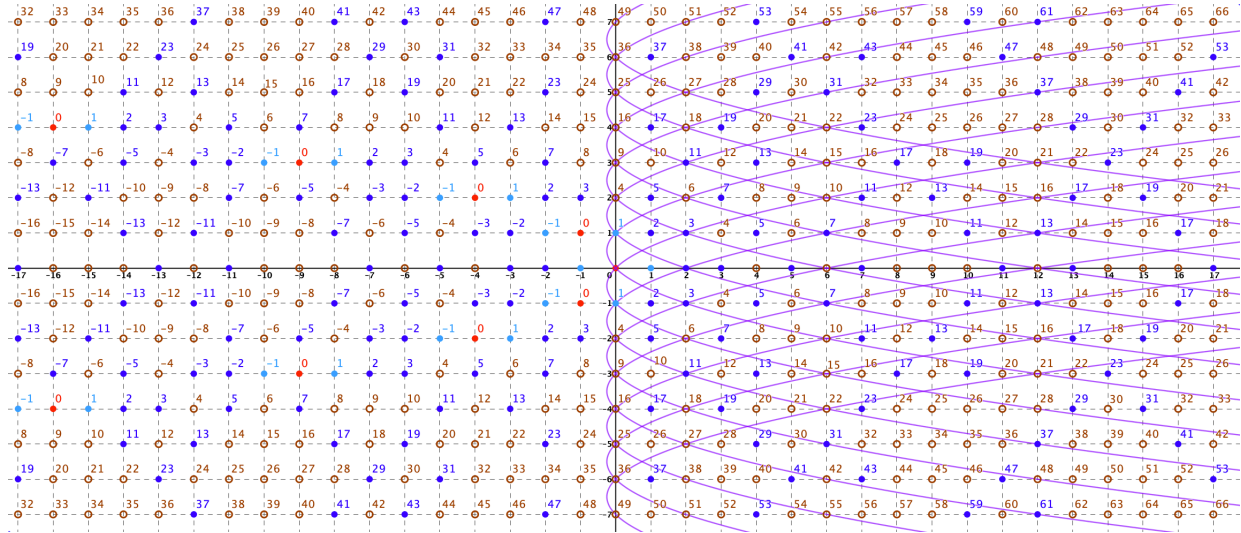


Figure 1. The C-Destroyer parabolas in column $x = 0$ of the lattice-grid $PS[x + 1, x, x + 1]$. They have offset following the staircase function with the step of a unit. These parabolas have equations in the XY plane of the form $x = y^2 - Odd * y + Oblong$. In terms of the offset value: $x = y^2 - (2f + 1)y + (f^2 + f)$.

Each parabola $x = y^2 - (2f + 1)y + (f^2 + f)$ in lattice-grid $PS[x + 1, x, x + 1]$ will produce a quadratic sequence of the form $Y[y] = ay^2 + by + c$. Now, to determine the coefficients a, b, c , for each sequence we have to determine three consecutive elements.

Over each parabola, we can choose 3 consecutive elements from top to bottom or from bottom to top. Because we are synchronizing the y index with the Y-axis, we will choose 3 consecutive bottom-up elements which is the increasing index direction: $[Y[-1], Y[0], Y[1]]$.

The elements of row $y = -1$ in the new paraboctys will be noted as $@Y[-1]$.

The elements of row $y = 0$ in the new paraboctys will be noted as $@Y[0]$.

The elements of row $y = 1$ in the new paraboctys will be noted as $@Y[1]$.

So, let's create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]]$. This new paraboctys will contain all the sequences formed by the C-Destroyer parabolas with a variable offset in a vertical of lattice-grid $PS[x + 1, x, x + 1]$.

As we have C-Destroyer parabolas, we can understand each sequence as being made of one element of the vertical column $x = 2$ to assume the $@Y[-1]$ elements position and two elements of the vertical column $x = 0$ to assume the $@Y[0]$ and $@Y[1]$ elements positions.

5.3 The C-Submarine parabolas with variable offset on a vertical of $PS[x + 1, x, x + 1]$

See the picture:

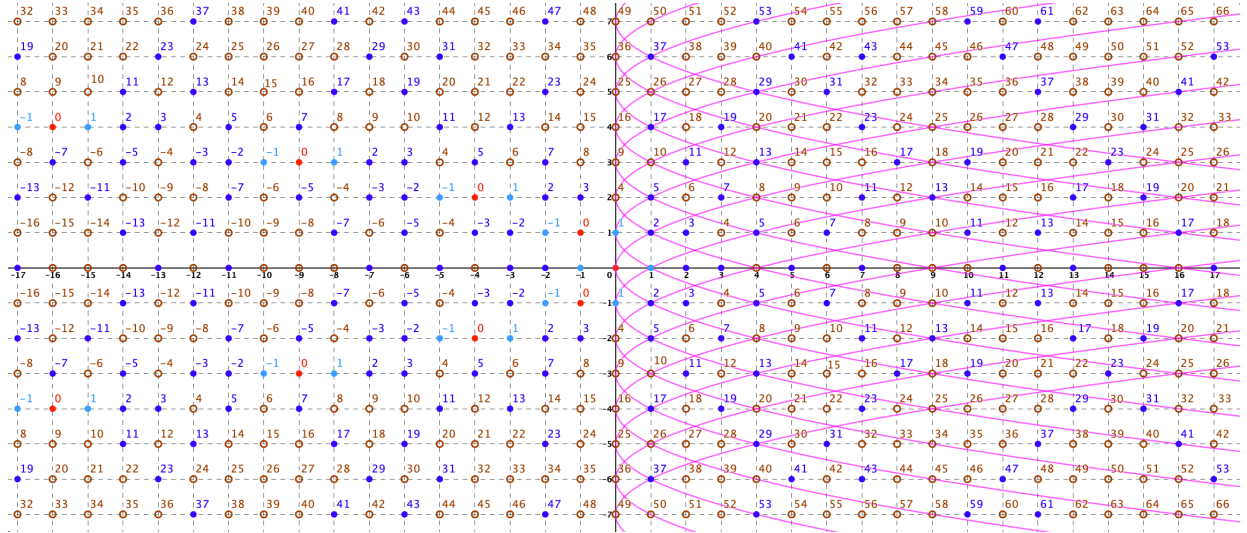


Figure 1. The C-Submarine parabolas in column $x = 0$ of the lattice-grid $PS[x + 1, x, x + 1]$. They have offset following the staircase function with the step of a unit. These parabolas have equations in the XY plane of the form $x = y^2 - \text{Even} * y + \text{Square}$. In terms of the offset value $x = y^2 - 2fy + f^2$.

Each parabola $x = y^2 - 2fy + f^2$ in lattice-grid $PS[x + 1, x, x + 1]$ will produce a quadratic sequence of the form $Y[y] = ay^2 + by + c$. Now, to determine the coefficients a, b, c , for each sequence we have to determine three consecutive elements.

Over each parabola, we can choose 3 consecutive elements from top to bottom or from bottom to top. Because we are synchronizing the y index with the Y-axis, we will choose 3 consecutive bottom-up elements which is the increasing index direction: $[Y[-1], Y[0], Y[1]]$.

The elements of row $y = -1$ in the new paraboctys will be noted as $@Y[-1]$.

The elements of row $y = 0$ in the new paraboctys will be noted as $@Y[0]$.

The elements of row $y = 1$ in the new paraboctys will be noted as $@Y[1]$.

So, let's create the new paraboctys $PS[@Y[-1], @Y[0], @Y[1]]$. This new paraboctys will contain all the sequences formed by the C-Submarine parabolas with a variable offset in a vertical of lattice-grid $PS[x + 2, x, x]$.

As we have C-Submarine parabolas, we can understand each sequence as being made of two elements of the vertical column $x = 1$ to assume the $@Y[-1]$ and $@Y[1]$ elements position and one element of the vertical column $x = 0$ to assume the $@Y[0]$ elements positions.

5.4 The C-Destroyer and C-Submarine interleaving parabolas with a varying offset in $PS[x + 1, x, x + 1]$

See the picture:

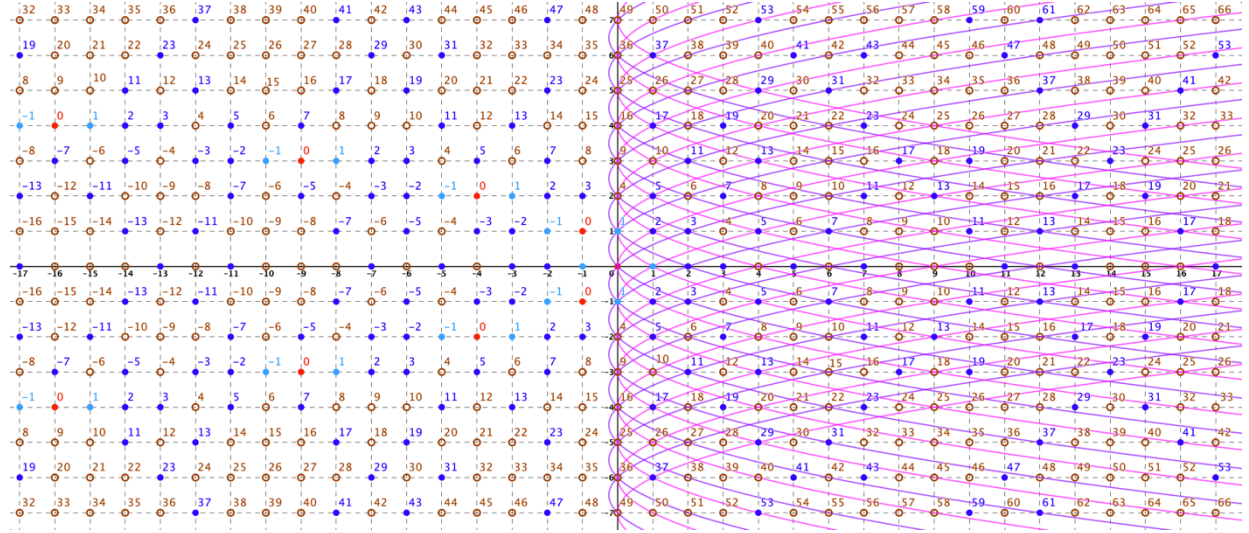


Figure 1. The combined C-Destroyers and C-Submarines vertical parabolas in column $x = 0$ of the lattice-grid $PS[x + 1, x, x + 1]$.

Column -->	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Classif.	ACC	DES	ACC	SUB	ACC	DES	ACC	SUB	ACC	DES	ACC	SUB	ACC	DES	ACC	SUB	ACC	DES	ACC	SUB	ACC	DES	ACC	SUB	ACC	DES	ACC	SUB	ACC	DES	ACC	
y_ip	-3.75	-3.5	-3.25	-3	-2.75	-2.5	-2.25	-2	-1.75	-1.5	-1.25	-1	-0.75	-0.5	-0.25	0	0.25	0.5	0.75	1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5	3.75	
f	-4	-4	-3	-3	-3	-3	-2	-2	-2	-2	-1	-1	-1	-1	0	0	0	0	1	1	1	1	2	2	2	2	3	3	3	4		
a	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
b	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	-1	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15	
c	64	49	49	36	36	25	25	16	16	9	9	4	4	1	1	0	0	1	1	4	4	9	9	16	16	25	25	36	36	49	49	
15	739	709	694	666	651	625	610	586	571	549	534	514	499	481	466	450	435	421	406	394	379	369	354	346	331	325	310	306	291	289	274	
14	666	637	623	596	582	557	543	520	506	485	471	452	438	421	407	392	378	365	351	340	326	317	303	296	282	277	263	260	246	245	231	
13	597	569	556	530	517	493	480	458	445	425	412	394	381	365	352	338	325	313	300	290	277	269	256	250	237	233	220	218	205	205	192	
12	532	505	493	468	456	433	421	400	388	369	357	340	328	313	301	288	276	265	253	244	232	225	213	208	196	193	181	180	168	169	157	
11	471	445	434	410	399	377	366	346	335	317	306	290	279	265	254	242	231	221	210	202	191	185	174	170	159	157	146	146	135	137	126	
10	414	389	379	356	346	325	315	296	286	269	259	244	234	221	211	200	190	181	171	164	154	149	139	136	126	125	115	116	106	109	99	
9	361	337	328	306	297	277	268	250	241	225	216	202	193	181	172	162	153	145	136	130	121	117	108	106	97	97	88	90	81	85	76	
8	312	289	281	260	252	233	225	208	200	185	177	164	156	145	137	128	120	113	105	100	92	89	81	80	72	73	65	68	60	65	57	
7	267	245	238	218	211	193	186	170	163	149	142	130	123	113	106	98	91	85	78	74	67	65	58	58	51	53	46	50	43	49	42	
6	226	205	199	180	174	157	151	136	130	117	111	100	94	85	79	72	66	61	55	52	46	45	39	40	34	37	31	36	30	37	31	
5	189	169	164	146	141	125	120	106	101	89	84	74	69	61	56	50	45	41	36	34	29	29	24	26	21	25	20	26	21	29	24	
4	156	137	133	116	112	97	93	80	76	65	61	52	48	41	37	32	28	25	21	20	16	17	13	16	12	17	13	20	16	25	21	
3	127	109	106	90	87	73	70	58	55	45	42	34	31	25	22	18	15	13	10	10	7	9	6	10	7	13	10	18	15	25	22	
2	102	85	83	68	66	53	51	40	38	29	27	20	18	13	11	8	6	5	3	4	2	5	3	8	6	13	11	20	18	29	27	
Y[1]	1	81	65	64	50	49	37	36	26	25	17	16	10	9	5	4	2	1	1	0	2	1	5	4	10	9	17	16	26	25	37	36
Y[0]	0	64	49	49	36	36	25	16	16	9	9	4	4	1	1	0	0	1	1	4	4	9	9	16	16	25	25	36	36	49	49	
Y[-1]	-1	51	37	38	26	27	17	18	10	11	5	6	2	3	1	2	3	5	6	10	11	17	18	26	27	37	38	50	51	65	66	
-2	42	29	31	20	22	13	15	8	10	5	7	4	6	5	7	8	10	13	15	20	22	29	31	40	42	53	55	68	70	85	87	
-3	37	25	28	18	21	13	16	10	13	9	12	10	13	13	16	18	21	25	28	34	37	45	48	58	61	73	76	90	93	109	112	
-4	36	25	29	20	24	17	21	16	20	17	21	20	24	25	29	32	36	41	45	52	56	65	69	80	84	97	101	116	120	137	141	
-5	39	29	34	26	31	25	30	26	31	29	34	34	39	41	46	50	55	61	66	74	79	89	94	106	111	125	130	146	151	169	174	
-6	46	37	43	36	42	37	43	40	46	45	51	52	58	61	67	72	78	85	91	100	106	117	123	136	142	157	163	180	186	205	211	
-7	57	49	56	50	57	52	60	58	65	65	72	74	81	85	92	98	105	113	120	130	137	149	156	170	177	193	200	218	225	245	252	
-8	72	65	72	68	76	72	81	80	88	89	97	100	108	113	121	128	136	145	153	164	172	185	193	208	216	233	241	260	268	289	297	
-9	91	85	94	90	99	97	106	106	115	117	126	130	139	145	154	162	171	181	190	202	211	225	234	250	259	277	286	306	315	337	346	
-10	114	109	119	116	126	125	135	136	146	149	159	164	174	181	191	200	210	221	231	244	254	269	279	296	306	325	335	356	366	389	399	
-11	141	137	148	146	157	157	168	170	181	185	196	202	213	221	232	242	253	265	276	290	301	317	328	346	357	377	388	410	421	445	456	
-12	172	169	181	180	192	193	205	208	220	225	237	244	256	265	277	288	300	313	325	340	352	369	381	400	412	433	445	468	480	505	517	
-13	207	205	218	218	231	233	246	250	263	269	282	290	303	313	326	338	351	365	378	394	407	425	438	458	471	493	506	530	543	569	582	
-14	246	245	259	260	274	277	291	296	310	317	331	340	354	365	379	392	406	421	435	452	466	485	499	520	534	557	571	596	610	637	651	
-15	289	289	304	306	321	325	340	346	361	369	384	394	409	421	436	450	465	481	496	514	529	549	564	586	601	625	640	666	681	709	724	

Figure 1. The combined C-Destroyers and C-Submarines parabolas in $PS[x + 1, x, x + 1]$ table.

	CENTER						
	-2	-1	0	1	2	3	
Y[1]	1	5	4	2	1	1	0
Y[0]	0	1	1	0	0	1	1
Y[-1]	-1	1	2	2	3	5	6

Figure 1. The center of the combined C-Destroyers and C-Submarines parabolas in table $PS[x + 1, x, x + 1]$.

5.4.1 The row $Y[-1] = X_1[x]$

The center of the row $Y[-1] \equiv \{\dots, 1, 2, 2, 3, 5, 6, \dots\}$.

The row $Y[-1]$ is the result of the interlacing between two quadratics:

$$Y[-1] = X_1[x = \text{even}] + X_1[x = \text{Odd}]$$

$X_1[x = \text{Even}]$ is based on sequence $[1, 2, 5] = n^2 + 2n + 2 \equiv A002522 \equiv A160457$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_1[x = \text{Even}] \equiv A00002050202 \equiv [1, 0, 2, 0, 5, 0] \equiv \left(\frac{x}{2}\right)^2 + x + 2 = \frac{x^2 + 4x + 8}{4}$$

$$= 0.25x^2 + x + 2 \equiv \frac{A087475}{4} \equiv [1.25, 1, 1.25] = \frac{x^2 + 2^2}{2^2} @f = 0$$

AXXXXXX

$\equiv \{\dots, 0, 65, 0, 50, 0, 37, 0, 26, 0, 17, 0, 10, 0, 5, 0, 2, 0, 1, 0, 2, 0, 5, 0, 10, 0, 17, 0, 26, 0, 37, 0, \dots\}$

and

$X_1[x = \text{Odd}]$ is based on sequence $[2, 3, 6] = n^2 + 2n + 3 \equiv A059100$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_1[x = \text{Odd}] \equiv A000509010000 \equiv [2, 0, 3, 0, 6, 0] = \left(\frac{x + 1}{2}\right)^2 + x + 1 + 3$$

$$= \frac{x^2 + 2x + 1 + 4x + 16}{4} = \frac{x^2 + 6x + 17}{4} = 0.25x^2 + 1.5x + 4.25$$

$$\equiv \frac{A189833}{4} \equiv [2.25, 2, 2.25] = \frac{x^2 + (\sqrt{8})^2}{2^2} @f = 0$$

AXXXXXX

$\equiv \{\dots, 83, 65, 66, 50, 51, 37, 38, 26, 27, 17, 18, 10, 11, 5, 6, 2, 3, 1, 2, 2, 3, 5, 6, 10, 11, 17, 18,$

$26, 27, 37, 38, \dots\}$

$$X_1[-x = \text{Even}] = \frac{x^2 + 4x + 8}{4} \equiv \frac{A087475}{4}$$

$$X_1[-x = \text{Odd}] = \frac{x^2 + 6x + 17}{4} \equiv \frac{A189833}{4}$$

$$X_1[-x] = X_1[-x = \text{even}] + X_1[-x = \text{Odd}]$$

$$X_1[-x] = \frac{x^2 + (5x - x(-1)^x) + (12.5 - 4.5(-1)^x)}{4}$$

$$X_1[-x] = \frac{x^2 + 5x + 12.5 - (x + 4.5)(-1)^x}{4}$$

$$X_1[-x] = \frac{2x^2 + 10x + 25 - (2x + 9)(-1)^x}{8}$$

Process table to produce the row Y[-1]							
Classif.	SUB	SUB		SUB	SUB		
y_ip	-1	-2	X1 [Even]	-1	-3	X1 [Odd]	X1 = X1 [Even] + X1 [Odd]
f	-1	-2		-1	-3		
	A002522	X1 [Even]		A059100	X1 [Odd]		
a	1	0,25		1	0,25		
b	2	1		2	1,5		
c	2	2	AXXXXXX	3	4,25	AXXXXXX	AXXXXXX
15	257	73,25	0	258	83	83	83
14	226	65	65	227	74,25	0	65
13	197	57,25	0	198	66	66	66
12	170	50	50	171	58,25	0	50
11	145	43,25	0	146	51	51	51
10	122	37	37	123	44,25	0	37
9	101	31,25	0	102	38	38	38
8	82	26	26	83	32,25	0	26
7	65	21,25	0	66	27	27	27
6	50	17	17	51	22,25	0	17
5	37	13,25	0	38	18	18	18
4	26	10	10	27	14,25	0	10
3	17	7,25	0	18	11	11	11
2	10	5	5	11	8,25	0	5
Y[1]	1	5	3,25	0	6	6	6
Y[0]	0	2	2	3	4,25	0	2
Y[-1]	-1	1	1,25	0	2	3	3
-2	2	1	1	3	2,25	0	1
-3	5	1,25	0	6	2	2	2
-4	10	2	2	11	2,25	0	2
-5	17	3,25	0	18	3	3	3
-6	26	5	5	27	4,25	0	5
-7	37	7,25	0	38	6	6	6
-8	50	10	10	51	8,25	0	10
-9	65	13,25	0	66	11	11	11
-10	82	17	17	83	14,25	0	17
-11	101	21,25	0	102	18	18	18
-12	122	26	26	123	22,25	0	26
-13	145	31,25	0	146	27	27	27
-14	170	37	37	171	32,25	0	37
-15	197	43,25	0	198	38	38	38

Figure 1. Sequence AXXXXXX is the row Y[-1] of the combined C-Destroyers and C-Submarines parabolas in $PS[x + 1, x, x + 1]$. Because of the change of offset that occurs when we put the zeros, the direction of the final sequence is reversed.

The row Y[-1] is the Interleaving of A002522 (Square plus One) numbers and A059100 (Square plus Two) numbers.. The result is the sequence $Axxxxxx\{\dots, 197, 198, 170, 171, 145, 146, 122, 123, 101, 102, 82, 83, 65, 66, 50, 51, 37, 38, 26, 27, 17, 18, 10, 11, 5, 6, 2, 3, 1, 2, 2, 3, 5, 6, 10, 11, 17, 18, 26, 27, 37, 38, 50, 51, 65, 66, 82, 83, 101, 102, 122, 123, 145, 146, 170, 171, 197, 198, 226, 227, 257, 258, \dots\}$.

5.4.2 The row $Y[0] = X_2[x]$

The center of the row $Y[0] \equiv \{\dots, 1, 1, 0, 0, 1, 1, \dots\}$.

The row $Y[0]$ is the result of the interlacing between two quadratics:

$$Y[0] = X_2[x = \text{even}] + X_2[x = \text{Odd}]$$

$X_2[x = \text{Even}]$ is based on sequence $[1, 0, 1] = n^2 \equiv A000290 \equiv n(n \pm 0)$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_2[x = \text{Even}] \equiv A000290 \equiv [1, 0, 1] \equiv \left(\frac{x}{2}\right)^2 = \frac{x^2}{4} = 0.25x^2 \equiv \frac{A000290}{4}$$

$$\equiv [0.25, 0, 0.25] = \frac{x^2}{2^2} @f = 0$$

$AXXXXXX \equiv \{\dots, 0, 49, 0, 36, 0, 25, 0, 16, 0, 9, 0, 4, 0, 1, 0, 0, 0, 1, 0, 4, 0, 9, 0, 16, 0, 25, 0, 36, 0, 49, 0, \dots\}$

and

$X_2[x = \text{Odd}]$ is based on sequence $[1, 0, 1] = n^2 - n \equiv A000290$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_2[x = \text{Odd}] \equiv A000290 \equiv [0, 1, 0, 0, 1] = \left(\frac{x + 1}{2}\right)^2 = \frac{x^2 + 2x + 1}{4}$$

$$= 0.25x^2 + 0.5x + 0.25 \equiv \frac{A000290}{4} \equiv [0.25, 0, 0.25] = \frac{x^2}{2^2} @f = 0$$

$AXXXXXX \equiv \{\dots, 64, 0, 49, 0, 36, 0, 25, 0, 16, 0, 9, 0, 4, 0, 1, 0, 0, 0, 1, 0, 4, 0, 9, 0, 16, 0, 25, 0, 36, 0, 49, \dots\}$

$$X_2[x = \text{Even}] = \frac{x^2}{4} \equiv \frac{A000290}{4}$$

$$X_2[x = \text{Odd}] = \frac{x^2 + 2x + 1}{4} \equiv \frac{A000290}{4}$$

$$X_2[x] = X_2[x = \text{even}] + X_2[x = \text{Odd}]$$

$$X_2[x] = \frac{x^2 + (x - x(-1)^x) + (0.5 - 0.5(-1)^x)}{4}$$

$$X_2[x] = \frac{x^2 + x + 0.5 - (x + 0.5)(-1)^x}{4}$$

$$X_2[-x] = \frac{2x^2 + 2x + 1 - (2x + 1)(-1)^x}{8}$$

Process table to produce the row Y[0]								
Classif.	SUB	SUB		SUB	SUB			
y_ip	0	0	X2[Even]	0	-1	X2[Odd]	X2 = X2[Even] + X2[Odd]	
f	0	0		A000290	-1			X2[Odd]
a	1	0,25		1	0,25			
b	0	0		0	0,5			
c	0	0	AXXXXXX	0	0,25	AXXXXXX	A008794	
15	225	56,25	0	225	64	64	64	
14	196	49	49	196	56,25	0	49	
13	169	42,25	0	169	49	49	49	
12	144	36	36	144	42,25	0	36	
11	121	30,25	0	121	36	36	36	
10	100	25	25	100	30,25	0	25	
9	81	20,25	0	81	25	25	25	
8	64	16	16	64	20,25	0	16	
7	49	12,25	0	49	16	16	16	
6	36	9	9	36	12,25	0	9	
5	25	6,25	0	25	9	9	9	
4	16	4	4	16	6,25	0	4	
3	9	2,25	0	9	4	4	4	
2	4	1	1	4	2,25	0	1	
Y[1]	1	1	0,25	1	1	1	1	
Y[0]	0	0	0	0	0,25	0	0	
Y[-1]	-1	1	0,25	1	0	0	0	
-2	4	1	1	4	0,25	0	1	
-3	9	2,25	0	9	1	1	1	
-4	16	4	4	16	2,25	0	4	
-5	25	6,25	0	25	4	4	4	
-6	36	9	9	36	6,25	0	9	
-7	49	12,25	0	49	9	9	9	
-8	64	16	16	64	12,25	0	16	
-9	81	20,25	0	81	16	16	16	
-10	100	25	25	100	20,25	0	25	
-11	121	30,25	0	121	25	25	25	
-12	144	36	36	144	30,25	0	36	
-13	169	42,25	0	169	36	36	36	
-14	196	49	49	196	42,25	0	49	
-15	225	56,25	0	225	49	49	49	

Figure 1. Sequence A008794 is the row Y[0] of the combined C-Destroyers and C-Submarines parabolas in $PS[x + 1, x, x + 1]$.

The row Y[0] is the Interleaving of A000290 Square numbers and itself. The result is the sequence A008794 Squares repeated; $a(n) = \text{floor}(n/2)^2 \cdot \{ \dots, 225, 225, 196, 196, 169, 169, 144, 144, 121, 121, 100, 100, 81, 81, 64, 64, 49, 49, 36, 36, 25, 25, 16, 16, 9, 9, 4, 4, 1, 1, 0, 0, 1, 1, 4, 4, 9, 9, 16, 16, 25, 25, 36, 36, 49, 49, 64, 64, 81, 81, 100, 100, 121, 121, 144, 144, 169, 169, 196, 196, 225, 225, \dots \}$.

5.4.3 The row $Y[1] = X_3[x]$

The center of the row $Y[1] \equiv \{ \dots, 5, 4, 2, 1, 1, 0, \dots \}$.

The row $Y[1]$ is the result of the interlacing between two quadratics:

$$Y[1] = X_3[x = \text{even}] + X_3[x = \text{Odd}]$$

$X_3[x = \text{Even}]$ is based on sequence $[5, 2, 1] = n^2 - 2n + 2 \equiv A002522$

$$x = \text{Even} = 2n$$

$$n = \frac{x}{2}$$

$$X_3[x = \text{Even}] \equiv A002522 \equiv [4, 0, 1, 0, 0, 0] \equiv \left(\frac{x}{2}\right)^2 - x + 2 = \frac{x^2 - 4x + 8}{4}$$

$$= 0.25x^2 - 1x + 2 \equiv \frac{A087475}{4} \equiv [1.25, 1, 1.25] = \frac{x^2 + 2^2}{2^2} @f = 0$$

AXXXXXX

$\equiv \{ \dots, 0, 37, 0, 26, 0, 17, 0, 10, 0, 5, 0, 2, 0, 1, 0, 2, 0, 5, 0, 10, 0, 17, 0, 26, 0, 37, 0, 50, 0, 65, 0, \dots \}$

and

$X_3[x = \text{Odd}]$ is based on sequence $[4, 1, 0] = n^2 - 2n + 1 \equiv A000290$

$$x = \text{Odd} = 2n - 1$$

$$n = \frac{x + 1}{2}$$

$$X_3[x = \text{Odd}] \equiv A000290 \equiv [0, 4, 0, 1, 0, 0] = \left(\frac{x + 1}{2}\right)^2 - x - 1 + 1$$

$$= \frac{x^2 + 2x + 1 - 4x}{4} = \frac{x^2 - 2x + 1}{4} = 0.25x^2 - 0.5x + 0.25 \equiv \frac{A000290}{4}$$

$$\equiv [0.25, 0, 0.25] = \frac{x^2 + 0^2}{2^2} @f = 0$$

AXXXXXX

$\equiv \{ \dots, 49, 0, 36, 0, 25, 0, 16, 0, 9, 0, 4, 0, 1, 0, 0, 0, 1, 0, 4, 0, 9, 0, 16, 0, 25, 0, 36, 0, 49, 0, 64, \dots \}$

$$X_3[-x = \text{Even}] = \frac{x^2 - 4x + 8}{4} \equiv \frac{A087475}{4}$$

$$X_3[-x = \text{Odd}] = \frac{x^2 - 2x + 1}{4} \equiv \frac{A000290}{4}$$

$$X_3[-x] = X_3[-x = \text{even}] + X_3[-x = \text{Odd}]$$

$$X_3[-x] = \frac{x^2 - (3x + x(-1)^x) + (4.5 + 3.5(-1)^x)}{4}$$

$$X_3[-x] = \frac{x^2 - 3x + 4.5 - (x - 3.5)(-1)^x}{4}$$

$$X_3[-x] = \frac{2x^2 - 6x + 9 - (2x - 7)(-1)^x}{8}$$

Process table to produce the row Y[1]							
Classif.	SUB	SUB		SUB	SUB		
y_lp	1	2		1	1		
f	1	2		1	1		
	A002522	X3[Even]	X3[Even]	A000290	X3[Odd]	X3[Odd]	X3 = X3[Even] + X3[Odd]
a	1	0,25		1	0,25		
b	-2	-1		-2	-0,5		
c	2	2	Axxxxxx	1	0,25	Axxxxxx	Axxxxxx
15	197	43,25	0	196	49	49	49
14	170	37	37	169	42,25	0	37
13	145	31,25	0	144	36	36	36
12	122	26	26	121	30,25	0	26
11	101	21,25	0	100	25	25	25
10	82	17	17	81	20,25	0	17
9	65	13,25	0	64	16	16	16
8	50	10	10	49	12,25	0	10
7	37	7,25	0	36	9	9	9
6	26	5	5	25	6,25	0	5
5	17	3,25	0	16	4	4	4
4	10	2	2	9	2,25	0	2
3	5	1,25	0	4	1	1	1
2	2	1	1	1	0,25	0	1
Y[1]	1	1,25	0	0	0	0	0
Y[0]	0	2	2	1	0,25	0	2
Y[-1]	-1	5	3,25	4	1	1	1
-2	10	5	5	9	2,25	0	5
-3	17	7,25	0	16	4	4	4
-4	26	10	10	25	6,25	0	10
-5	37	13,25	0	36	9	9	9
-6	50	17	17	49	12,25	0	17
-7	65	21,25	0	64	16	16	16
-8	82	26	26	81	20,25	0	26
-9	101	31,25	0	100	25	25	25
-10	122	37	37	121	30,25	0	37
-11	145	43,25	0	144	36	36	36
-12	170	50	50	169	42,25	0	50
-13	197	57,25	0	196	49	49	49
-14	226	65	65	225	56,25	0	65
-15	257	73,25	0	256	64	64	64

Figure 1. Sequence Axxxxxx is the row Y[1] of the combined C-Destroyers and C-Submarines parabolas in $PS[x + 1, x, x + 1]$.

The row Y[1] is the Interleaving of A000290 Square numbers and A002522 (Square plus One) numbers. The result is the sequence Axxxxxx $\{\dots, 257, 256, 226, 225, 197, 196, 170, 169, 145, 144, 122, 121, 101, 100, 82, 81, 65, 64, 50, 49, 37, 36, 26, 25, 17, 16, 10, 9, 5, 4, 2, 1, 1, 0, 2, 1, 5, 4, 10, 9, 17, 16, 26, 25, 37, 36, 50, 49, 65, 64, 82, 81, 101, 100, 122, 121, 145, 144, 170, 169, 197, 196, \dots\}$.

6 Summary

PS[x+2, x, x]						
D-Destroyer						
Vertical $x = -y^2 + (2f+1)y - f^2 + f$			90°		90° f=0	
@Y[-1]	x^2+x-2	Oblong-2 $\equiv A028552 \equiv x(x-3)$	$4x+2$	$2 \cdot \text{Odd} \equiv 2 \pmod{4}$	$-x^2+x+2$	Oblong-2 $\equiv A028552 \equiv x(x-3)$
@Y[0]	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$	$2x$	Even $\equiv A005843$	$-x^2+x$	Oblong $\equiv A002378 \equiv x(x-1)$
@Y[1]	x^2-3x+2	Oblong $\equiv A002378 \equiv x(x-1)$	0	Zero	$-x^2+x$	Oblong $\equiv A002378 \equiv x(x-1)$
a	0	Zero	1	One	1	Unit
b	$-2x+2$	Even $\equiv A005843$	$-2x-1$	Odd $\equiv A005408$	-1	Unit
c	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$	$2x$	Even $\equiv A005843$	$-x^2+x$	Oblong $\equiv A002378 \equiv x(x-1)$

PS[x+2, x, x]						
D-Submarine						
Vertical $x = -y^2 + 2fy - f^2$			90°		90° f=0	
@Y[-1]	x^2+x-1	Fibonacci $\equiv A165900$	$3x+2$	$2 \pmod{3}$	$-x^2+2$	A008865
@Y[0]	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$	x	Integers $\equiv A256958$	$-x^2$	Square $\equiv A000290 \equiv x(x-0)$
@Y[1]	x^2-3x+1	Fibonacci $\equiv A165900$	-x	Integers $\equiv A256958$	$-x^2$	Square $\equiv A000290 \equiv x(x-0)$
a	0	Zero	1	One	1	Unit
b	$-2x+1$	Odd $\equiv A005408$	$-2x-1$	Odd $\equiv A005408$	-1	Unit
c	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$	x	Integers	x^2	Square $\equiv A000290 \equiv x(x-0)$

PS[x+2, x, x]						
D-(Destroyer and Submarine)						
Vertical $x = -y^2 + (2f+1)y - f^2 + f$ and $x = -y^2 + 2fy - f^2$						
@Y[-1]	$[-2, -2, 0] = n^2 + n - 2 \equiv A028552$	$(x^2+2x-8)/4 = 0.25x^2+0.5x-2 \equiv A028560/4 \equiv [-2, -2.25, -2] = (x^2-3^2)/2^2 @f=0$			A217571 X_1[-x] = $(2x^2+6x-9-(2x+7)(-1)^x)/8$	
@Y[0]	$[2, 0, 0] = n^2 - n \equiv A002378$	$(x^2-2x)/4 = 0.25x^2-0.5x \equiv A005563/4 \equiv [0, -0.25, 0] = (x^2-1^2)/2^2 @f=0$			A110660 X_2[-x] = $(2x^2-2x-1-(2x+1)(-1)^x)/8$	
@Y[1]	$[6, 2, 0] = n^2 - 3n + 2 \equiv A002378$	$(x^2-6x+8)/4 = 0.25x^2-1.5x+2 \equiv A005563/4 \equiv [0, -0.25, 0] = (x^2-1^2)/2^2 @f=0$			A188652 X_3[-x] = $(2x^2-10x-9-(2x+7)(-1)^x)/8$	
@Y[1]	$[5, 1, -1] = n^2 - 3n + 1 \equiv A165900$	$(x^2-4x-1)/4 = 0.25x^2-x-0.25 \equiv A028875/4 \equiv [-1, -1.25, -1] = (x^2-(\sqrt{5})^2)/2^2 @f=0$				

Figure 1. D-parabolas in PS[x + 2, x, x].

PS[x+2, x, x]						
C-Destroyer						
Vertical $x = y^2 - (2f+1)y + f^2 + f$			90°		90° f=0	
@Y[-1]	x^2+x+2	Oblong+2 $\equiv A014206$	$2x^2+2x$	A051890	x^2-x+2	Oblong+2 $\equiv A014206$
@Y[0]	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$	$2x^2$	A001105	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$
@Y[1]	x^2-3x+2	Oblong $\equiv A002378 \equiv x(x-1)$	$2x^2-2x$	A046092	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$
a	2	Two	1	Unit	1	Unit
b	$-2x$	Even $\equiv A005843$	$-2x-1$	Odd $\equiv A005408$	-1	Unit
c	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$	$2x^2$	A001105	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$

PS[x+2, x, x]						
C-Submarine						
Vertical $x = y^2 - 2fy + f^2$			90°		90° f=0	
@Y[-1]	x^2+x+1	A002061 \equiv Oblong + 1	$2x^2+3x+2$	A084849 / A130883	x^2+2	A059100
@Y[0]	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$	$2x^2+x$	A000384 / A014105	x^2	Square $\equiv A000290 \equiv x(x-0)$
@Y[1]	x^2-3x+3	A002061 \equiv Oblong + 1	$2x^2-x$	A000384 / A014105	x^2	Square $\equiv A000290 \equiv x(x-0)$
a	2	Two	1	Unit	1	Unit
b	$-2x+1$	Odd $\equiv A005408$	$-2x-1$	Odd $\equiv A005408$	-1	Unit
c	x^2-x	Oblong $\equiv A002378 \equiv x(x-1)$	$2x^2+x$	A000384 / A014105	x^2	Square $\equiv A000290 \equiv x(x-0)$

PS[x+2, x, x]						
C-(Destroyer and Submarine)						
Vertical $x = -y^2 + (2f+1)y - f^2 + f$ and $x = -y^2 + 2fy - f^2$						
@Y[-1]	$[1, 1, 3] = n^2 + n + 1 \equiv A002061$	$(x^2+2x+4)/4 = 0.25x^2+0.5x+1 \equiv A117950/4 \equiv [1, 0.75, 1] = (x^2+(\sqrt{3})^2)/2^2 @f=0$			AXXXXXX X_1[-x] = $(2x^2+6x+15-(2x+7)(-1)^x)/8$	
@Y[0]	$[2, 2, 4] = n^2 + n + 2 \equiv A014206$	$(x^2+4x+1)/4 = 0.25x^2+x+0.25 \equiv A117619/4 \equiv [2, 1.75, 2] = (x^2+(\sqrt{7})^2)/2^2 @f=0$			A110660 X_2[-x] = $(2x^2-2x-1-(2x+1)(-1)^x)/8$	
@Y[0]	$[2, 0, 0] = n^2 - n \equiv A002378$	$(x^2-2x)/4 = 0.25x^2-0.5x \equiv A005563/4 \equiv [0, -0.25, 0] = (x^2-1^2)/2^2 @f=0$			A110660 X_2[-x] = $(2x^2-2x-1-(2x+1)(-1)^x)/8$	
@Y[1]	$[7, 3, 1] = n^2 - 3n + 3 \equiv A002061$	$(x^2-6x+12)/4 = 0.25x^2-1.5x+3 \equiv A117950/4 \equiv [1, 0.75, 1] = (x^2-1^2)/2^2 @f=0$			A130404 X_3[-x] = $(2x^2-10x-9-(2x+7)(-1)^x)/8$	
@Y[1]	$[6, 2, 0] = n^2 - 3n + 2 \equiv A002378$	$(x^2-4x+3)/4 = 0.25x^2-x+0.75 \equiv A005563/4 \equiv [0, -0.25, 0] = (x^2-1^2)/2^2 @f=0$				

Figure 1. C-parabolas in PS[x + 2, x, x].

PS[x+1, x, x+1]						
D-Destroyer						
Vertical $x=-y^2+(2f+1)y-(f^2+f)$			90°		90° f=0	
@Y[-1]	x^2+2x-1	Square-2 \equiv A008865	$3x+1$	1 mod 3 \equiv A016777	$-x^2+x+1$	Fibonacci \equiv A165900
@Y[0]	x^2	Square \equiv A000290 \equiv x(x-0)	x	Integers \equiv A256958	$-x^2+x$	Oblong \equiv A002378 \equiv x(x-1)
@Y[1]	x^2-2x+1	Square \equiv A000290 \equiv x(x-0)	$-x+1$	Integers \equiv A256958	$-x^2+x+1$	Fibonacci \equiv A165900
a	0	Zero	1	Unit	1	Unit
b	$-2x+1$	Odd \equiv A005408	$-2x$	Even \equiv A005843	0	Zero
c	x^2	Square \equiv A000290 \equiv x(x-0)	x	Integers \equiv A256958	$-x^2+x$	Oblong \equiv A002378 \equiv x(x-1)

PS[x+1, x, x+1]						
D-Submarine						
Vertical $x=-y^2+2fy-f^2$			90°		90° f=0	
@Y[-1]	x^2+2x	Square-1 \equiv A005563 \equiv x(x-2)	$2x+1$	Odd \equiv A005408	$-x^2+1$	Square-1 \equiv A005563 \equiv x(x-2)
@Y[0]	x^2	Square \equiv A000290 \equiv x(x-0)	0	Zero	$-x^2$	Square \equiv A000290 \equiv x(x-0)
@Y[1]	x^2-2x	Square-1 \equiv A005563 \equiv x(x-2)	$-2x+1$	Odd \equiv A005408	$-x^2+1$	Square-1 \equiv A005563 \equiv x(x-2)
a	0	Zero	1	Unit	1	Unit
b	$-2x$	Even \equiv A005843	$-2x$	Even \equiv A005843	0	Zero
c	x^2	Square \equiv A000290 \equiv x(x-0)	0	Zero	x^2	Square \equiv A000290 \equiv x(x-0)

PS[x+1, x, x+1]						
D-(Destroyer and Submarine)						
Vertical $x=-y^2+(2f+1)y-(f^2+f)$ and $x=-y^2+2fy-f^2$						
@Y[-1]	$[-1, 0, 3]=n^2+2n=A005563$	$(x^2+4x)/4=0.25x^2+x=A028347/4=[-0.75, -1, -0.75]=(x^2-2^2)/2^2 @f=0$				Axxxxxx X_1[-x]=(2x^2+10x+1-(2x+1)(-1)^x)/8
@Y[0]	$[1, 0, 1]=n^2=A000290$	$x^2/4=0.25x^2=A000290/4=[0.25, 0, 0.25]=x^2/2^2 @f=0$				A008794 X_2[-x]=(2x^2+2x+1-(2x+1)(-1)^x)/8
@Y[1]	$[3, 0, -1]=n^2-2n=A005563$	$(x^2-4x)/4=0.25x^2-x=A028347/4=[-0.75, -1, -0.75]=(x^2-2^2)/2^2 @f=0$				A131805\+A135276 \equiv X_3[-x]=(2x^2-6x+1+(2x-1)(-1)^x)/8
@Y[1]	$[4, 1, 0]=n^2-2n+1=A000290$	$(x^2-2x+1)/4=0.25x^2-0.5x+0.25=A000290/4=[0.25, 0, 0.25]=x^2/2^2 @f=0$				

Figure 1. D-parabolas in $PS[x + 1, x, x + 1]$.

PS[x+1, x, x+1]						
C-Destroyer						
Vertical $x=y^2-(2f+1)y+(f^2+f)$			90°		90° f=0	
@Y[-1]	x^2+2x+3	Square+2 \equiv A059100	$2x^2+x+1$	$\sqrt{A130883} + A084849$	x^2-x+1	Oblong+1 \equiv A002061
@Y[0]	x^2	Square \equiv A000290 \equiv x(x-0)	$2x^2-x$	$\sqrt{A014105} + A000384$	x^2-x	Oblong \equiv A002378 \equiv x(x-1)
@Y[1]	x^2-2x+1	Square \equiv A000290 \equiv x(x-0)	$2x^2-3x+1$	$\sqrt{A000384} + A014105$	x^2-x+1	Oblong+1 \equiv A002061
a	2	Two	1	Unit	1	Unit
b	$-2x-1$	Odd \equiv A005408	$-2x$	Even \equiv A005843	0	Zero
c	x^2	Square \equiv A000290 \equiv x(x-0)	$2x^2-x$	$\sqrt{A014105} + A000384$	x^2-x	Oblong \equiv A002378 \equiv x(x-1)

PS[x+1, x, x+1]						
C-Submarine						
Vertical $x=y^2-2fy+f^2$			90°		90° f=0	
@Y[-1]	x^2+2x+2	Square+1 \equiv A002522	$2x^2+2x+1$	$2^*\text{Oblong}+1 \equiv$ A001844	x^2+1	Square+1 \equiv A002522
@Y[0]	x^2	Square \equiv A000290 \equiv x(x-0)	$2x^2$	$2^*\text{Square} \equiv$ A001105	x^2	Square \equiv A000290 \equiv x(x-0)
@Y[1]	x^2-2x+2	Square+1 \equiv A002522	$2x^2-2x+1$	$2^*\text{Oblong}+1 \equiv$ A001844	x^2+1	Square+1 \equiv A002522
a	2	Two	1	Unit		
b	$-2x$	Even \equiv A005843	$-2x$	Even \equiv A005843		
c	x^2	Square \equiv A000290 \equiv x(x-0)	$2x^2$	$2^*\text{Square} \equiv$ A001105		

PS[x+1, x, x+1]						
C-(Destroyer and Submarine)						
Vertical $x=-y^2+(2f+1)y-(f^2+f)$ and $x=-y^2+2fy-f^2$						
@Y[-1]	$[1, 2, 5]=n^2+2n+2=A002522$	$(x^2+4x+8)/4=0.25x^2+x+2=A087475/4=[1.25, 1, 1.25]=(x^2+2^2)/2^2 @f=0$				Axxxxxx X_1[-x]=(2x^2+10x+25-(2x+9)(-1)^x)/8
@Y[0]	$[2, 3, 6]=n^2+2n+3=A059100$	$(x^2+6x+17)/4=0.25x^2+1.5x+4.25=A189833/4=[2.25, 2, 2.25]=(x^2+(\sqrt{8})^2)/2^2 @f=1$				A008794 X_2[-x]=(2x^2+2x+1-(2x+1)(-1)^x)/8
@Y[1]	$[1, 0, 1]=n^2=A000290$	$x^2/4=0.25x^2=A000290/4=[0.25, 0, 0.25]=x^2/2^2 @f=0$				
@Y[1]	$[5, 2, 1]=n^2-2n+2=A002522$	$(x^2-4x+8)/4=0.25x^2-1x+2=A087475/4=[1.25, 1, 1.25]=(x^2+2^2)/2^2 @f=0$				Axxxxxx X_3[-x]=(2x^2-6x+9-(2x-7)(-1)^x)/8
@Y[1]	$[4, 1, 0]=n^2-2n+1=A000290$	$(x^2-2x+1)/4=0.25x^2-0.5x+0.25=A000290/4=[0.25, 0, 0.25]=(x^2+0^2)/2^2 @f=0$				

Figure 1. C-parabolas in $PS[x + 1, x, x + 1]$.

7 Conclusions

Parabolas D in paraboctys decreases the coefficient a .

Parabolas C in paraboctys increases the coefficient a .

Verticals and diagonals straight lines in paraboctys keep the same coefficient a of paraboctys.

Horizontal lines in paraboctys are always the Integer numbers line.

Acknowledgments

I would like to thank all the essential support and inspiration provided by Mr. H. Bli Shem and my Family.

I would like to thank the editors of The On-Line Encyclopedia of Integer Sequences for their valuable comments on my submissions to the Encyclopedia.

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