```
(* Appendix 3:
  99 Tuple Images From 8-tuples of Random Numbers Between -1 and +1 *)
(* Copyright May 4, 2006   Doug Youvan   www.youvan.com and www.pseudocolor.com *)

For[loop = 1, loop < 100, loop++,

 bckrow = .;
bckcol = .;
sum = .;
 gsum = .;
canvas = 562;

 bckrow = Table[{x, y}, {x, 1, canvas}, {y, 1, canvas}];
bckcol = Table[{x, y}, {x, 1, canvas}, {y, 1, canvas}];

 bckrow[[All, All]] = {0.0, 0.0, 0.0};
bckcol[[All, All]] = {0.0, 0.0, 0.0};

 (* all random numbers between a and b *)
 low = -1; high = 1;
 a = Random[Real, {low, high}, 4];
 b = Random[Real, {low, high}, 4];
 c = Random[Real, {low, high}, 4];
 d = Random[Real, {low, high}, 4];
 e = Random[Real, {low, high}, 4];
 f = Random[Real, {low, high}, 4];
 g = Random[Real, {low, high}, 4];
 h = Random[Real, {low, high}, 4];
 tup = Tuples[{a, b, c, d, e, f, g, h}, 3];

 Print[loop, "   ", a, "   ", b, "   ",
  c, "   ", d, "   ", e, "   ", f, "   ", g, "   ", h];

 For[j = 1, j ≤ 512, j++, bckcol[[All, j]] = tup[[j]]];
For[i = 1, i ≤ 512, i++, bckrow[[i, All]] = tup[[i]]];

sum = bckrow + bckcol;

 (* zeros all triplet values if any emelent is less than zero or greater than 1 *)

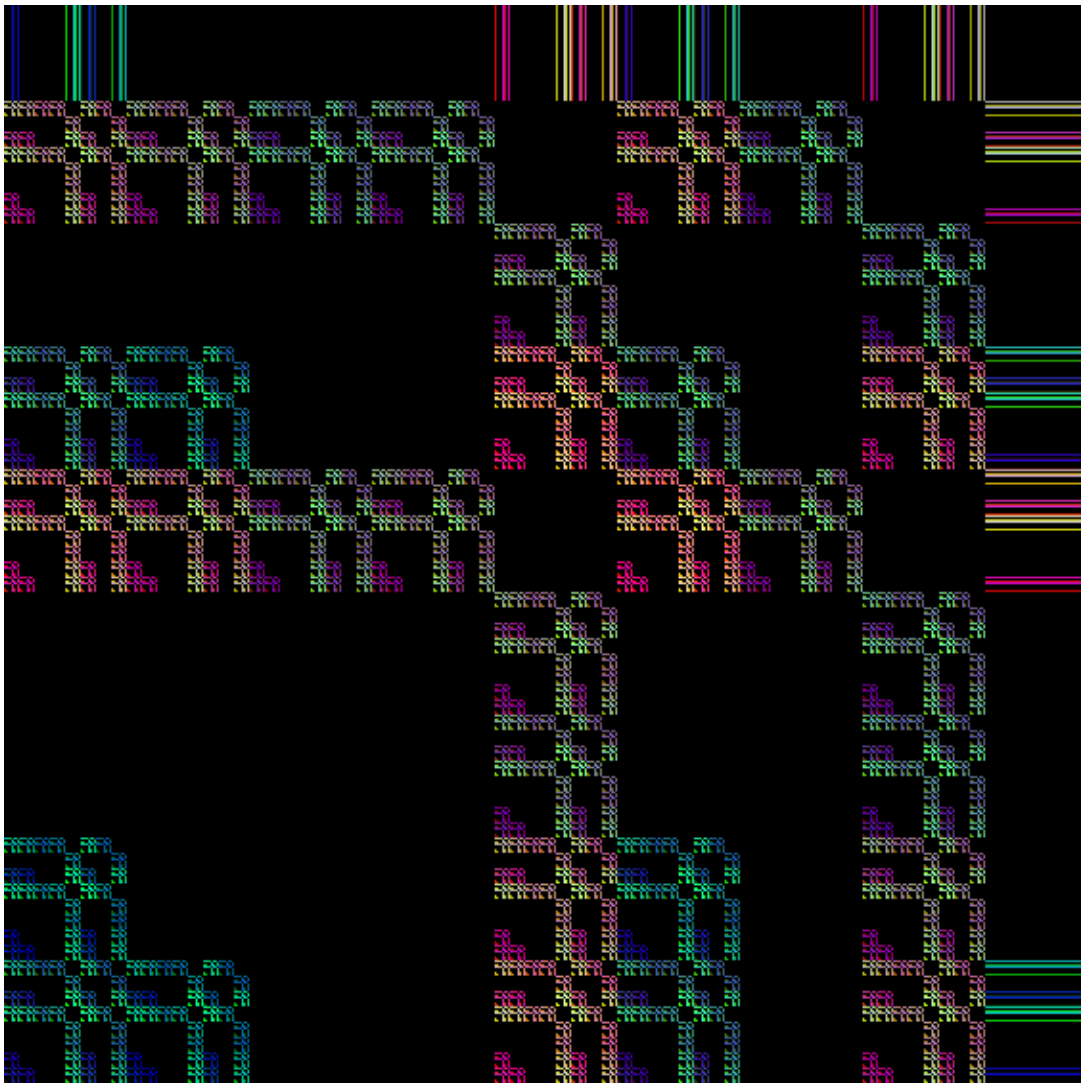
 For[i = 1, i ≤ canvas, i++, For[j = 1, j ≤ canvas, j++, For[c = 1, c ≤ 3, c++,
    If[(0 > sum[[i, j, c]]) || (sum[[i, j, c]] > 1), sum[[i, j, All]] = 0] ]]];


 gsum = Graphics[RasterArray[Apply[RGBColor, sum, {2}]],
   AspectRatio → error, ImageSize → {532, 532}];
 (* intentional error to get image size and aspect ratio
   correct in both the displayed and exported images *)

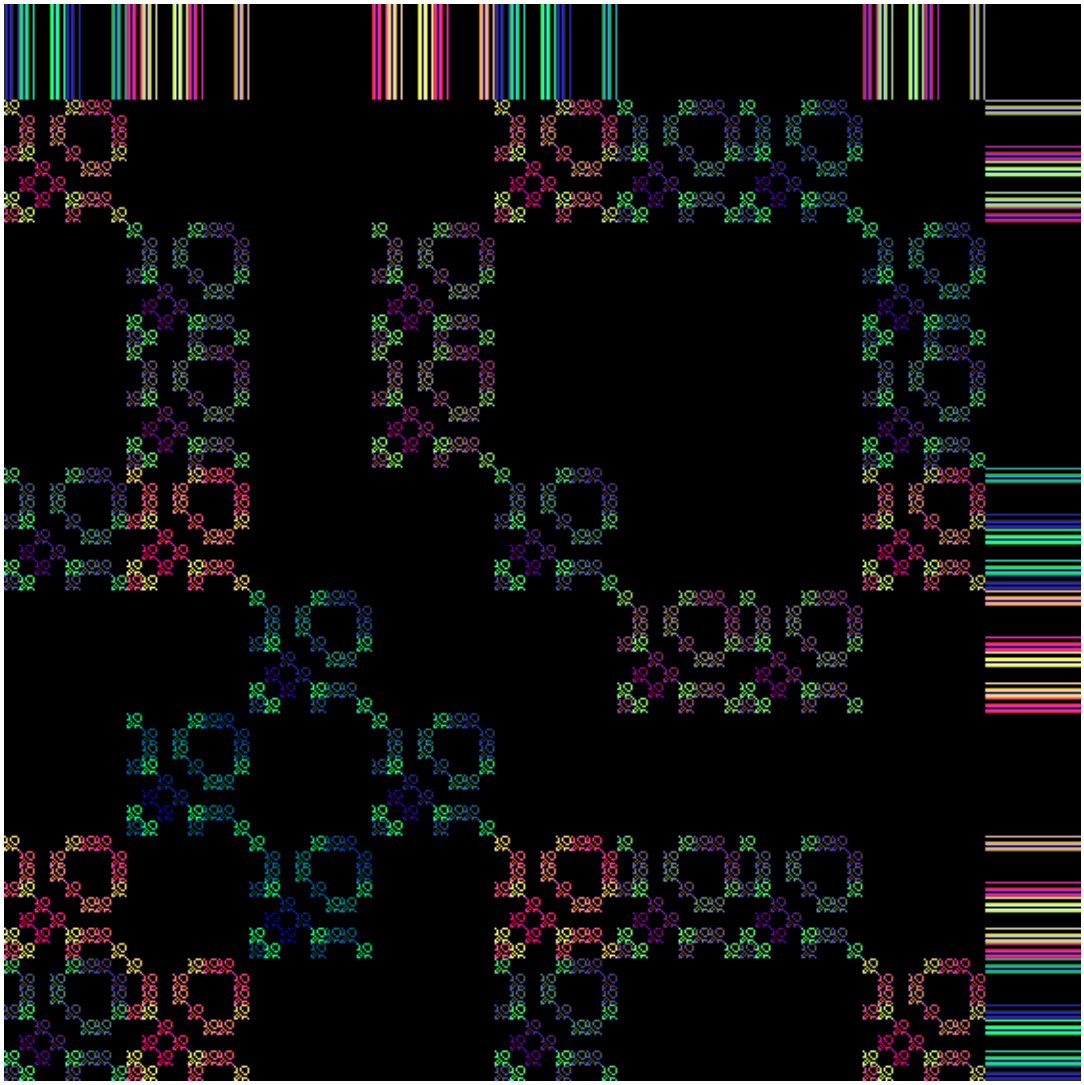
 Show[gsum];

] (* end big loop *)
```

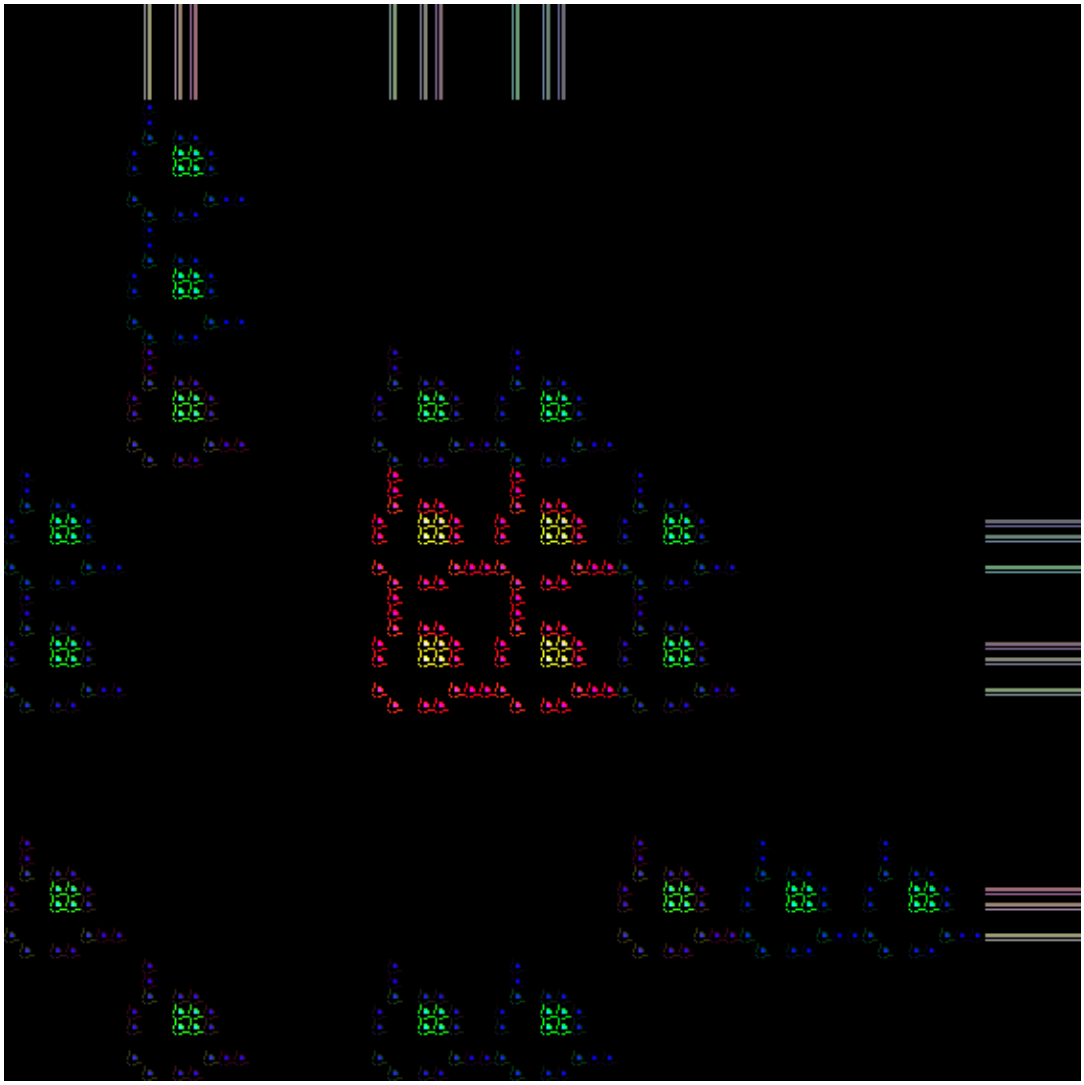
1 0.05164 −0.05283 −0.2895 −0.2012 0.7857 0.1732 −0.2792 0.6362



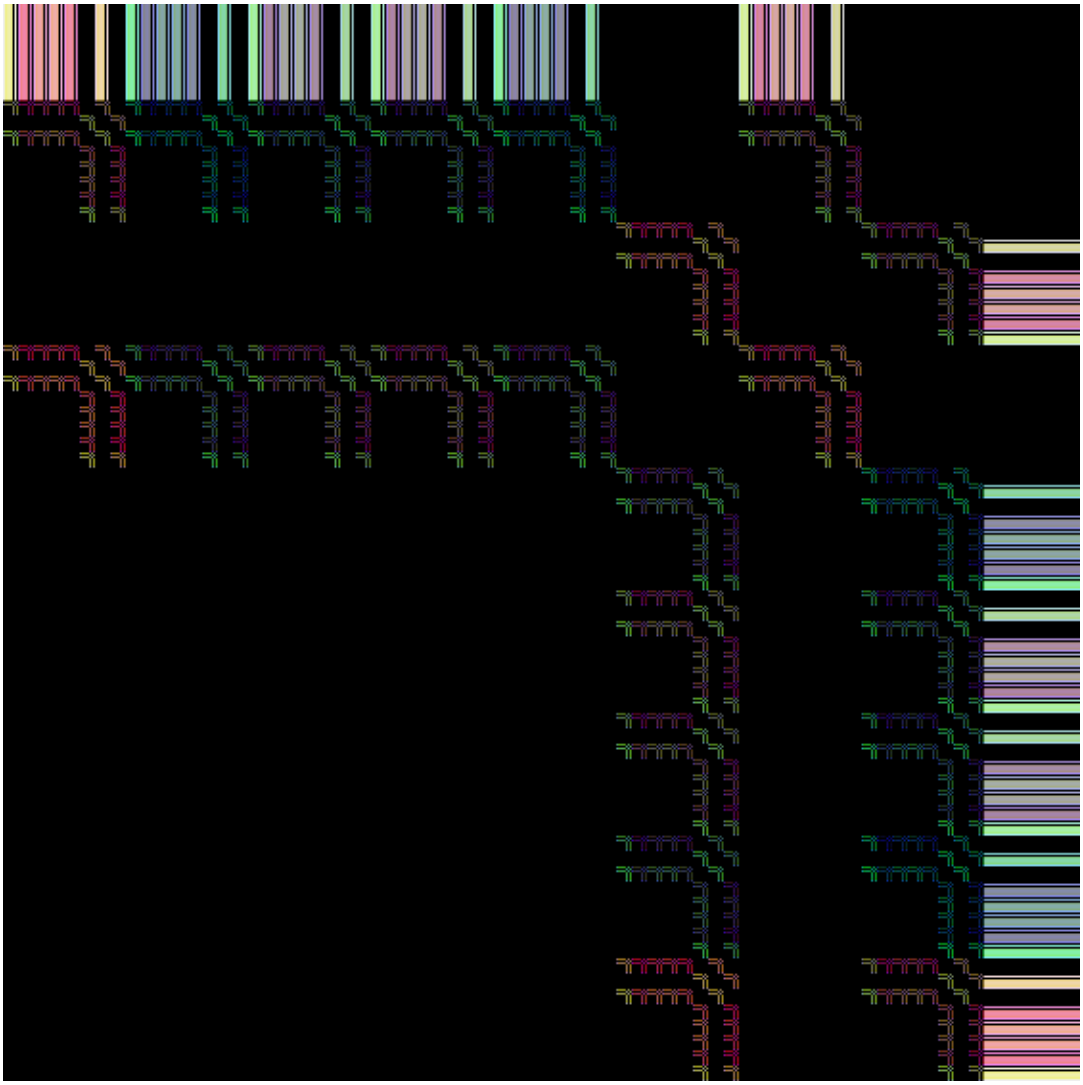
2 0.1690 0.8287 −0.7945 0.9536 0.1587 −0.3654 −0.4543 0.6829



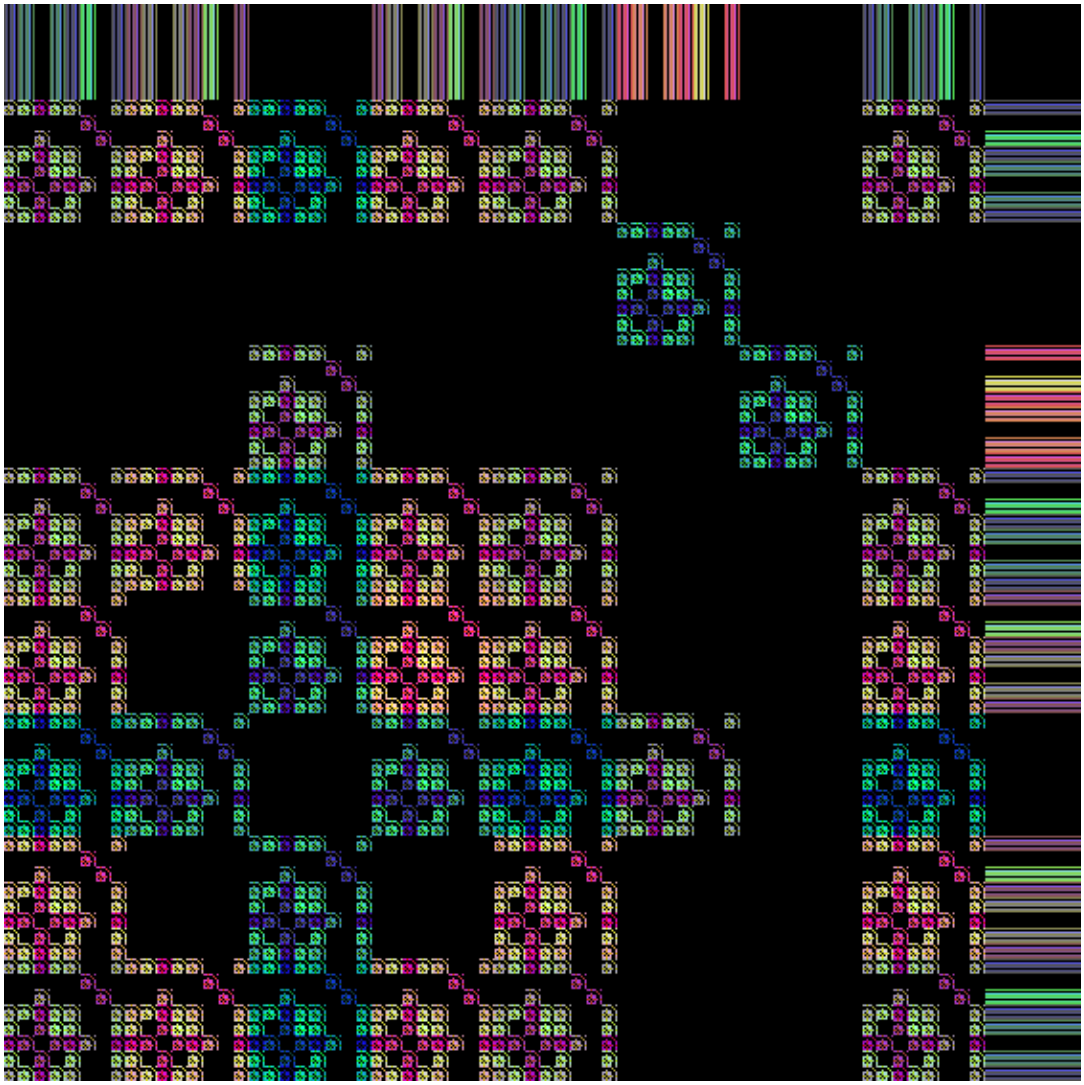
```
3   -0.3915   0.6040   -0.9247   0.5020   0.4334   -0.3655   -0.6129   -0.5426
```



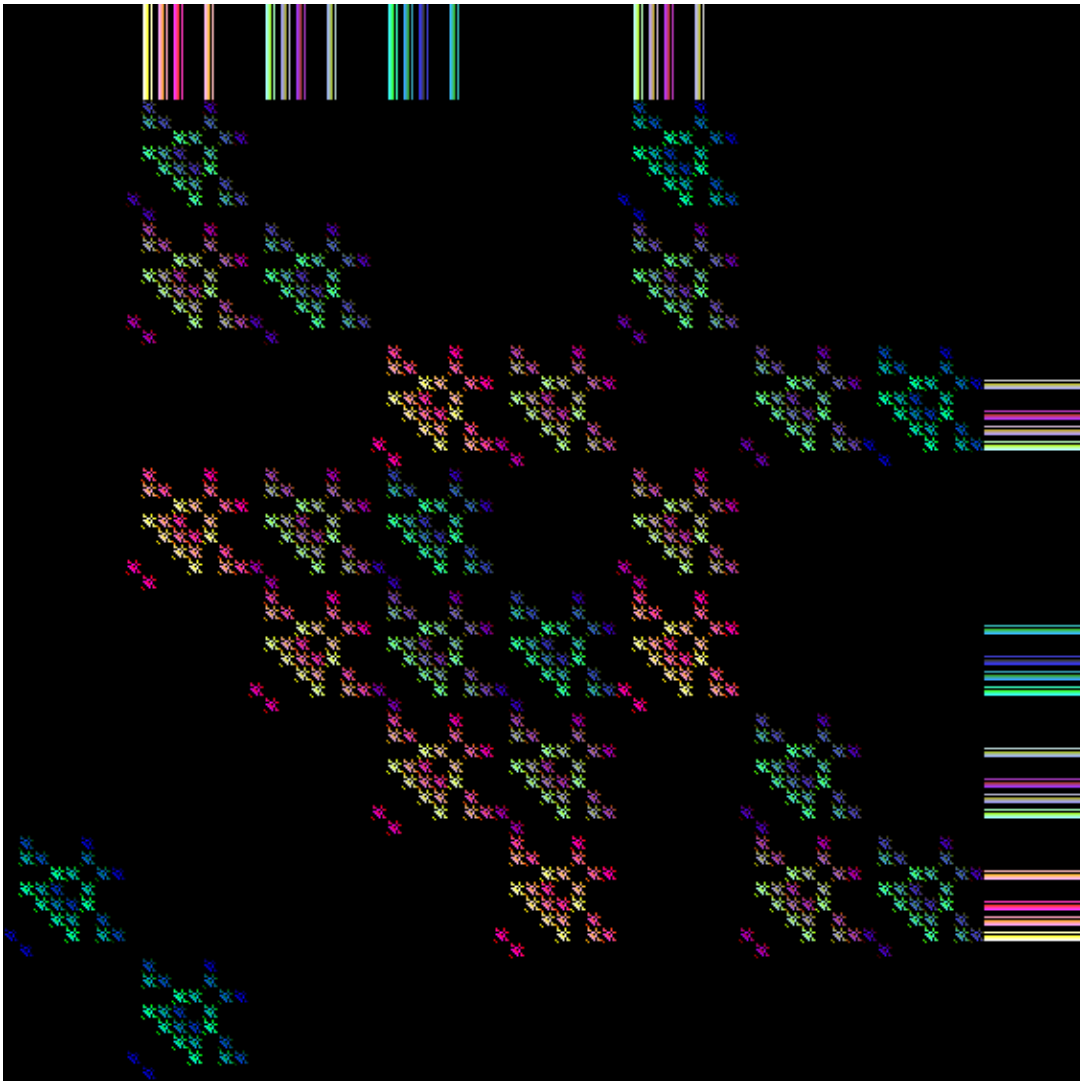
4 0.9341 0.5261 0.6263 0.6713 0.5586 −0.3137 0.8434 −0.4857



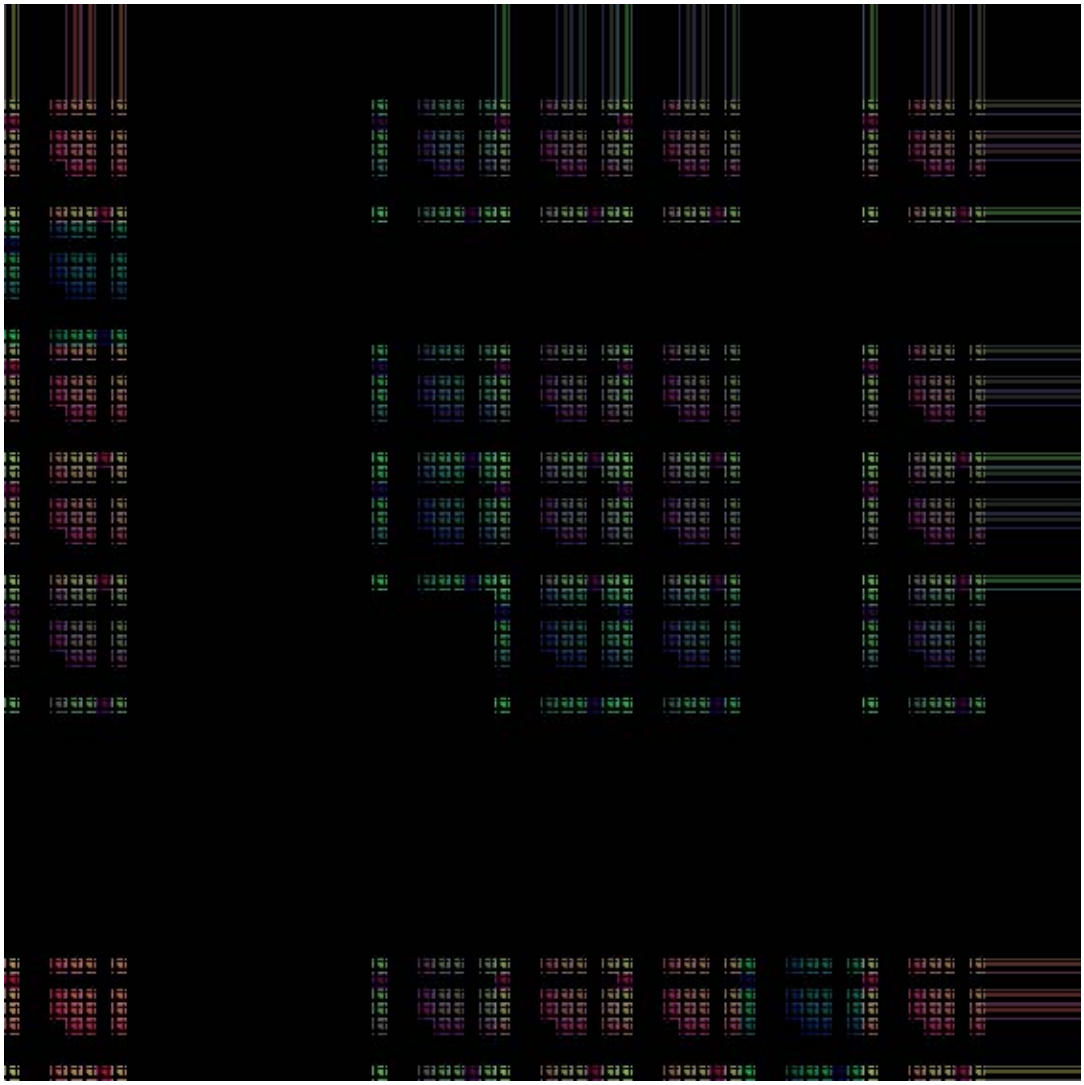
```
5   0.3251   0.5246   -0.2536   0.5053   0.3351   0.8428   -0.6134   0.3282
```



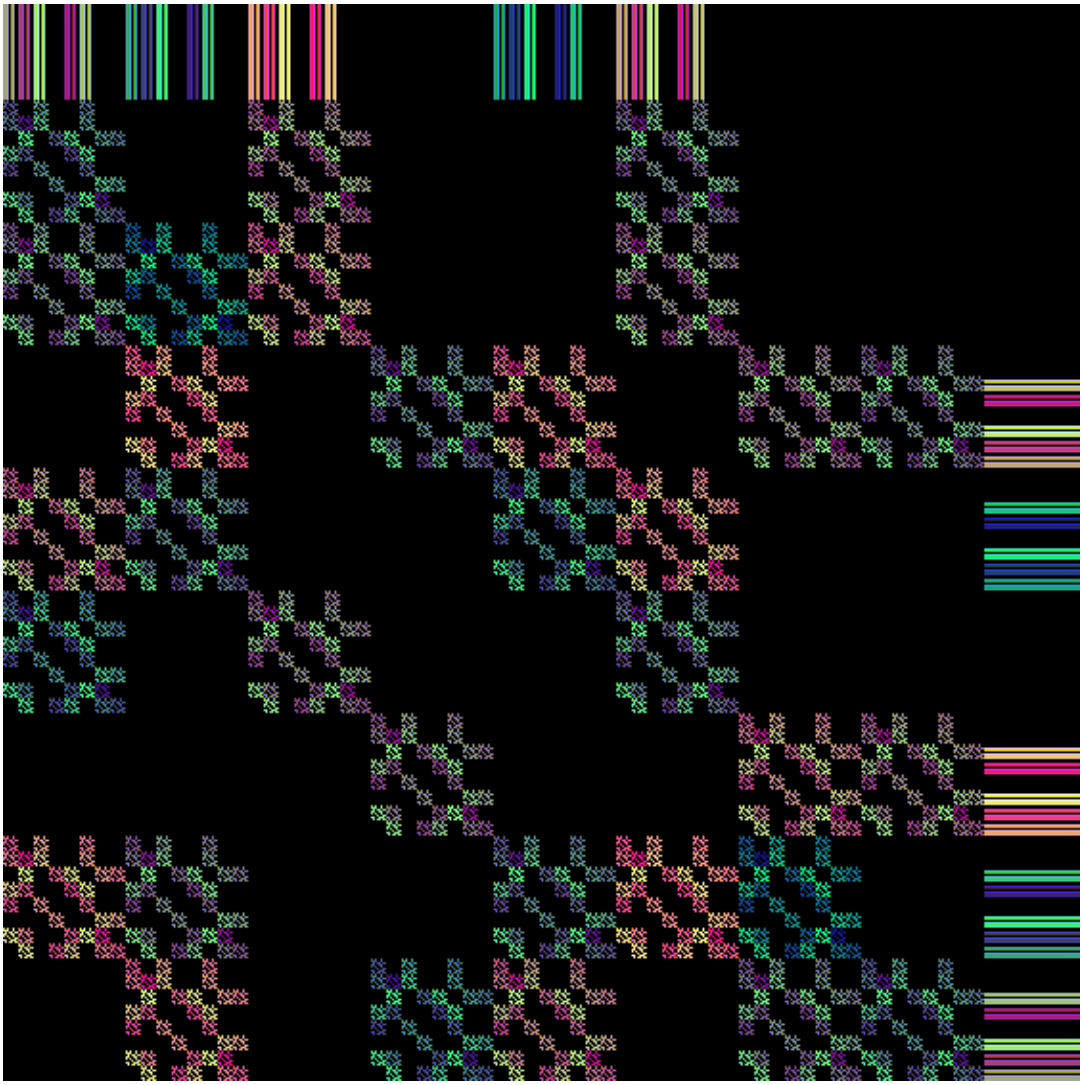
```
6   -0.9711   0.9735   0.6265   0.2220   -0.02631   0.7404   -0.3417   -0.7188
```



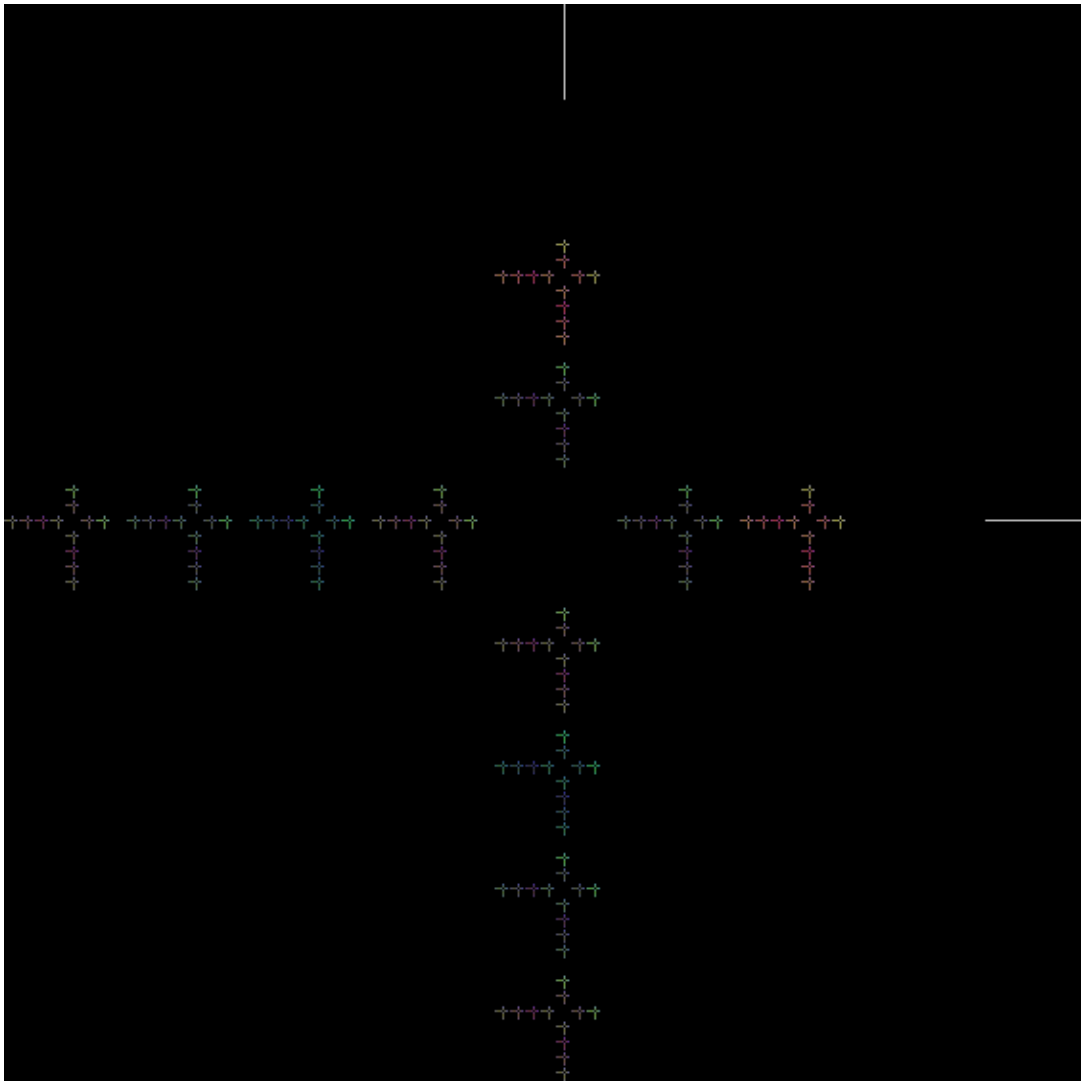
7 0.3427 −0.8120 −0.6200 −0.02722 0.1349 0.1684 −0.3063 0.2162



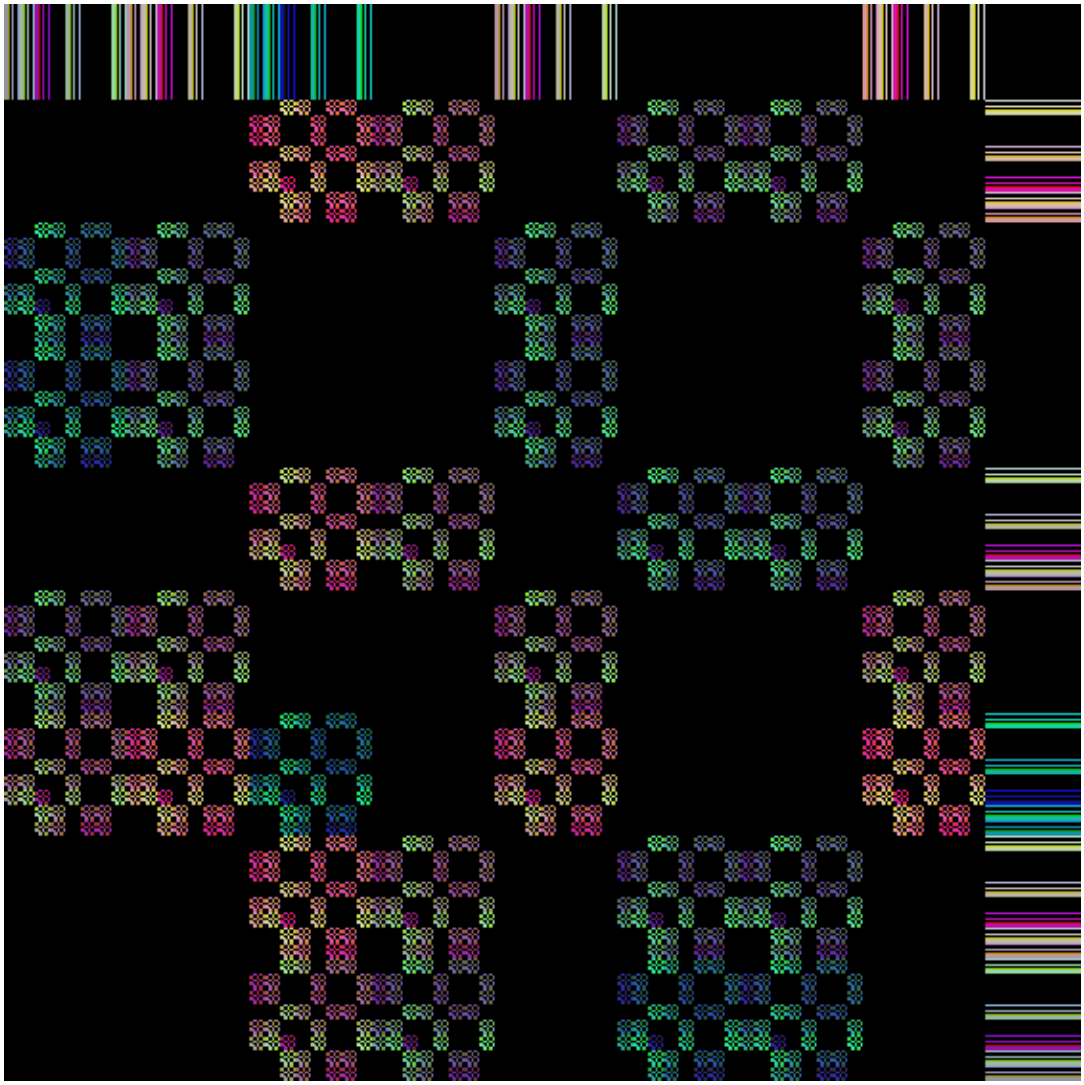
```
8   0.6340   0.2550   0.9333   -0.3414   0.1466   0.7531   -0.1506   -0.2837
```



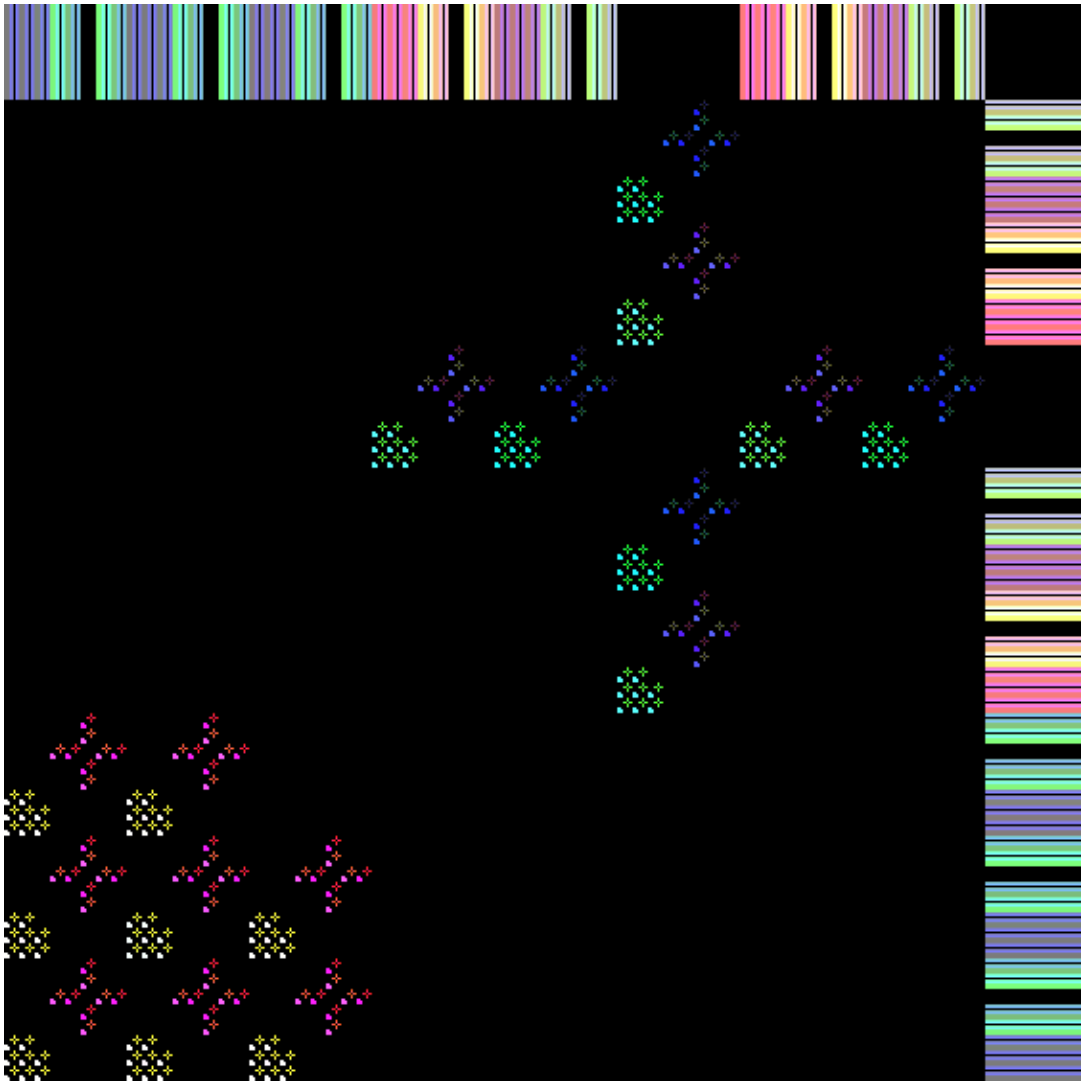
9 −0.3066 −0.4022 −0.5026 −0.3107 0.6994 −0.3839 −0.1451 −0.9641



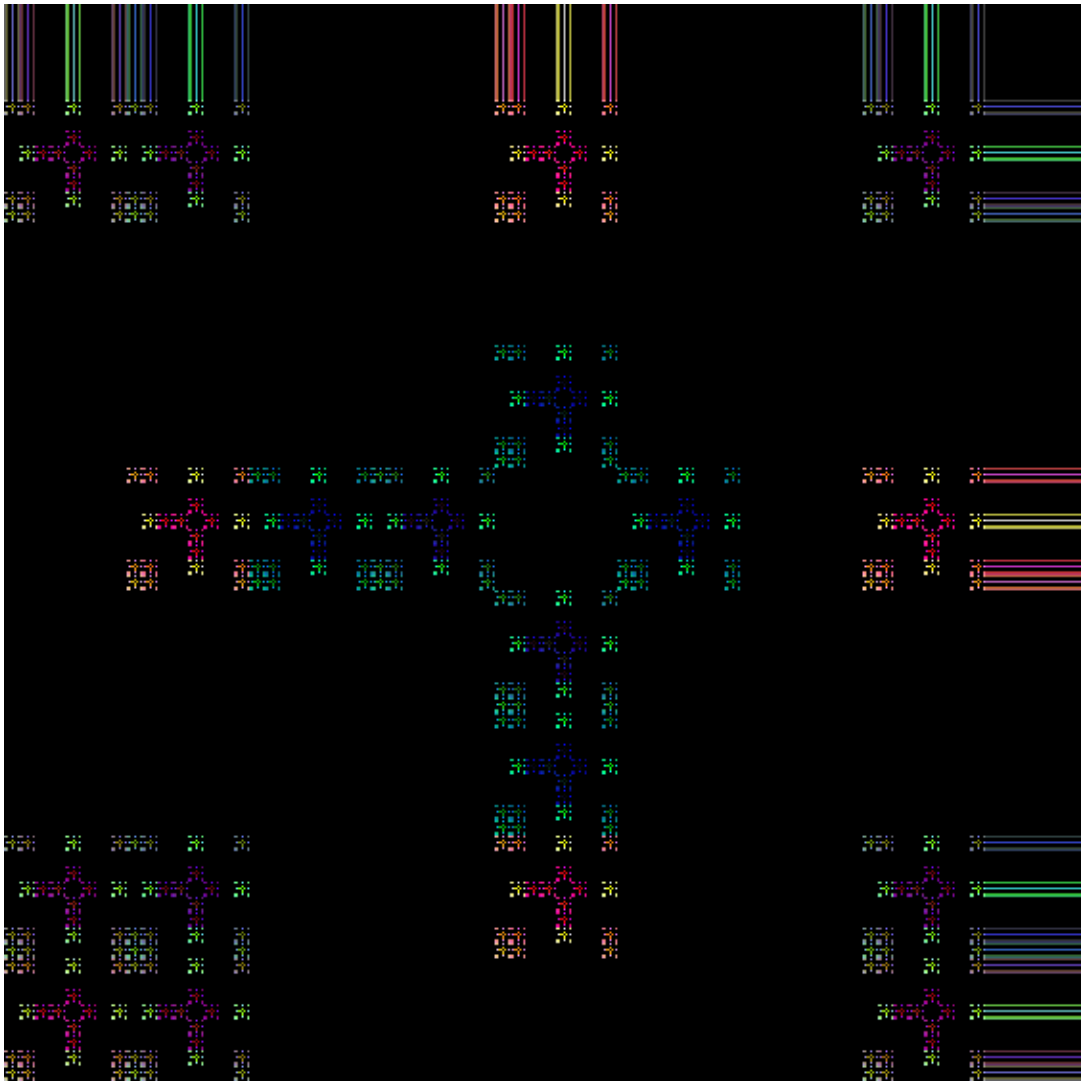
```
10   0.5796   0.7463   0.06979   -0.1596   0.7019   -0.3938   -0.3878   0.8249
```



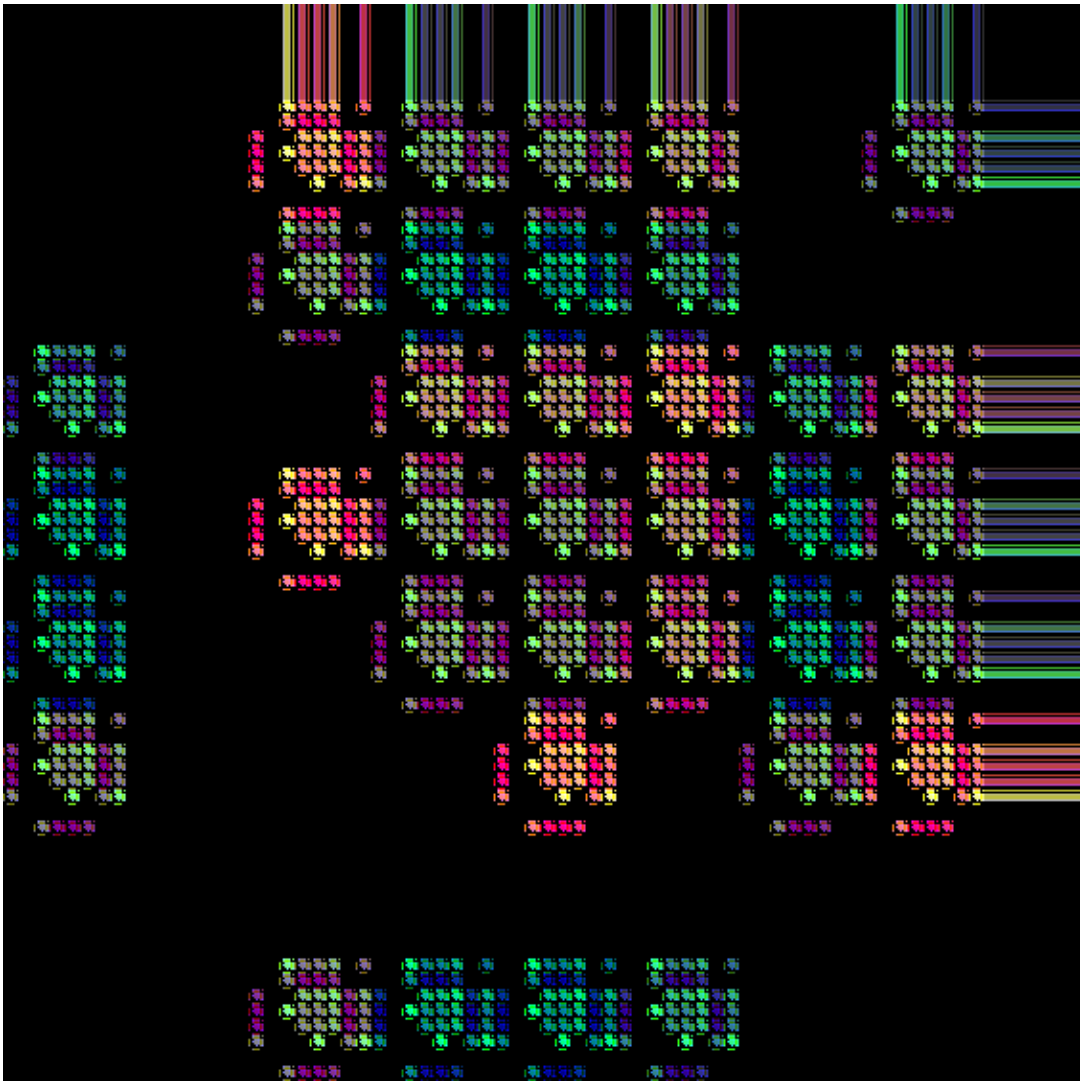
```
11   0.4949   0.4760   0.5125   0.9611   0.7495   -0.6105   0.9987   0.7606
```



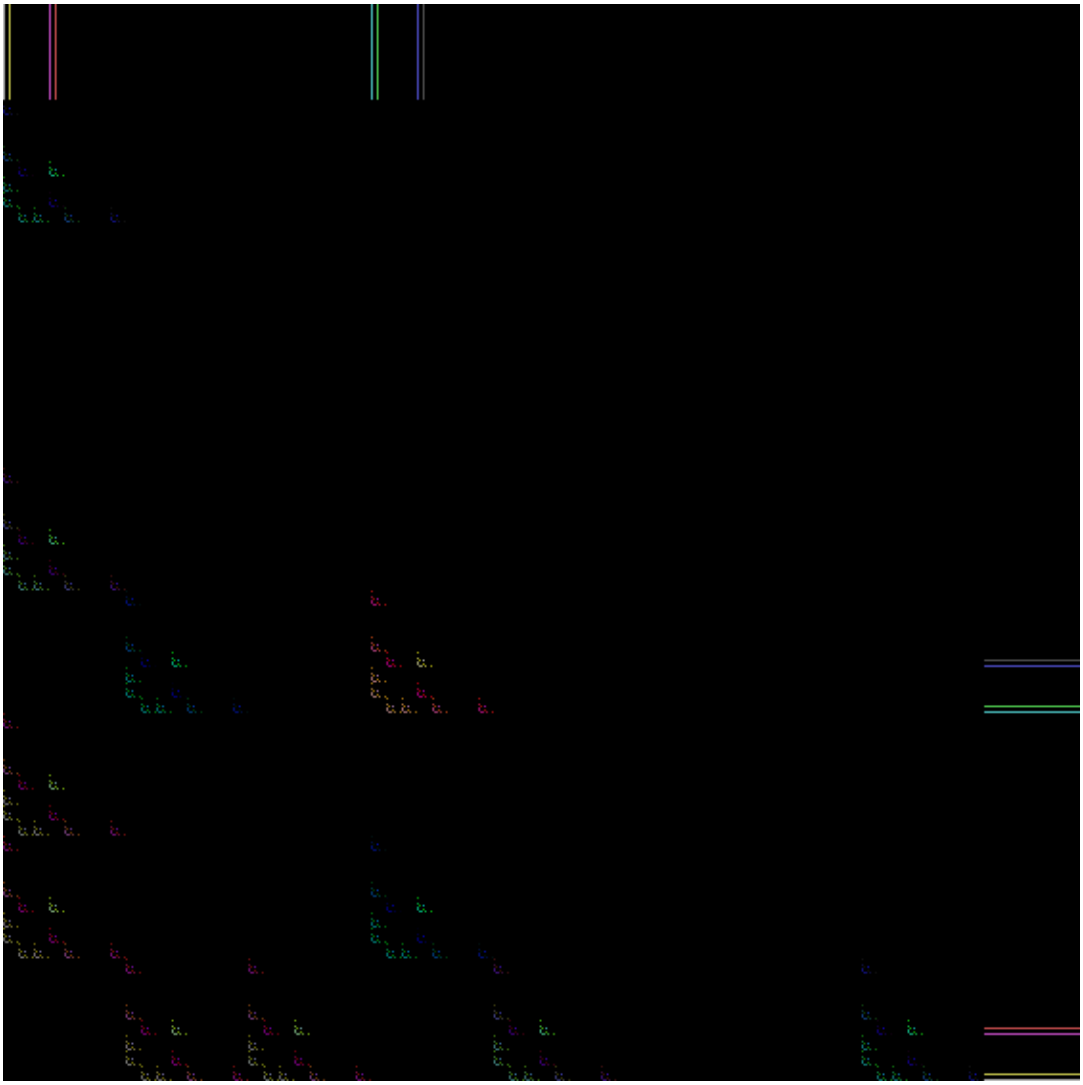
12 0.3845 0.2089 −0.6881 −0.5949 0.7220 −0.6759 −0.7615 0.2648



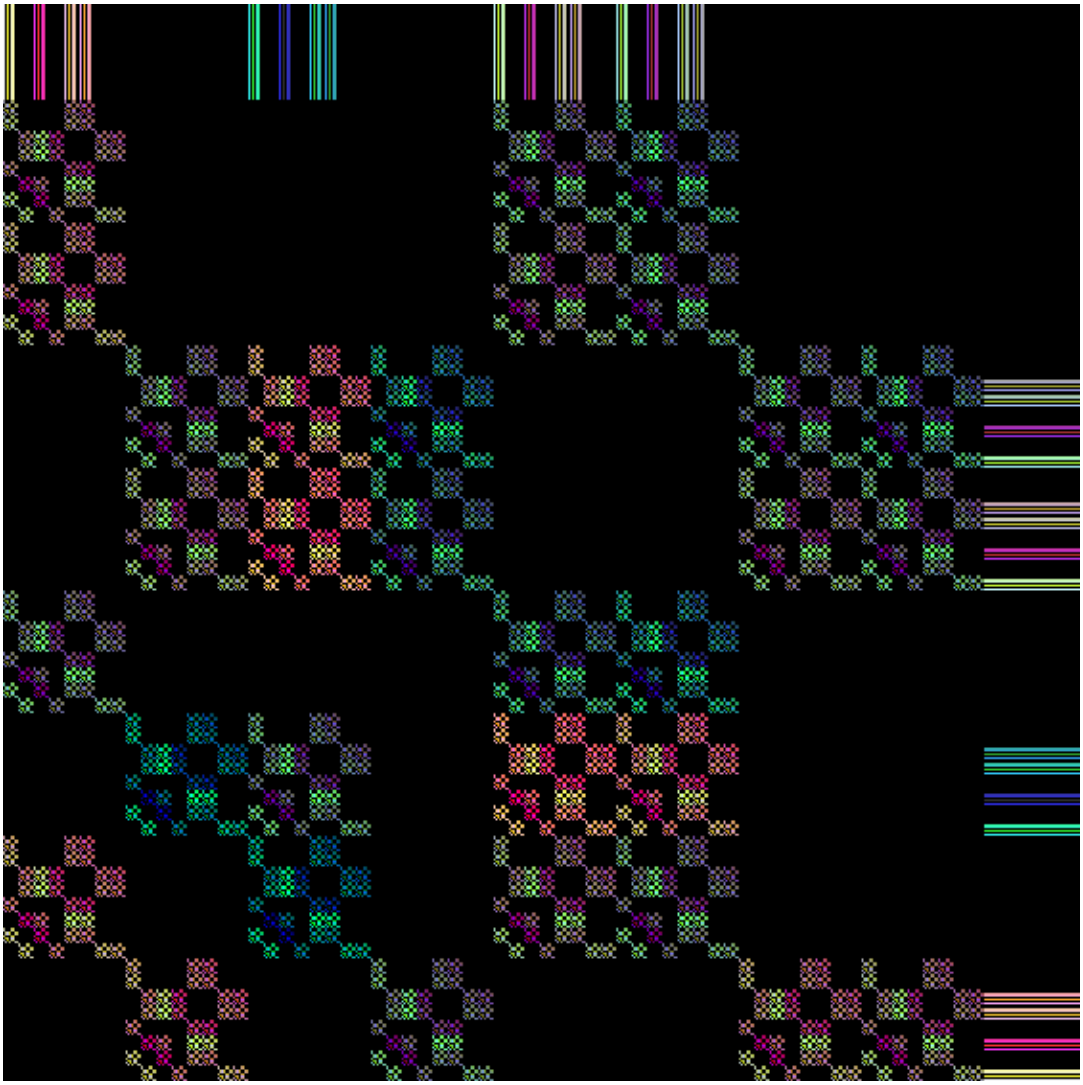
```
13   -0.2445   -0.8836   0.7452   0.2781   0.2620   0.4443   -0.2325   0.2175
```



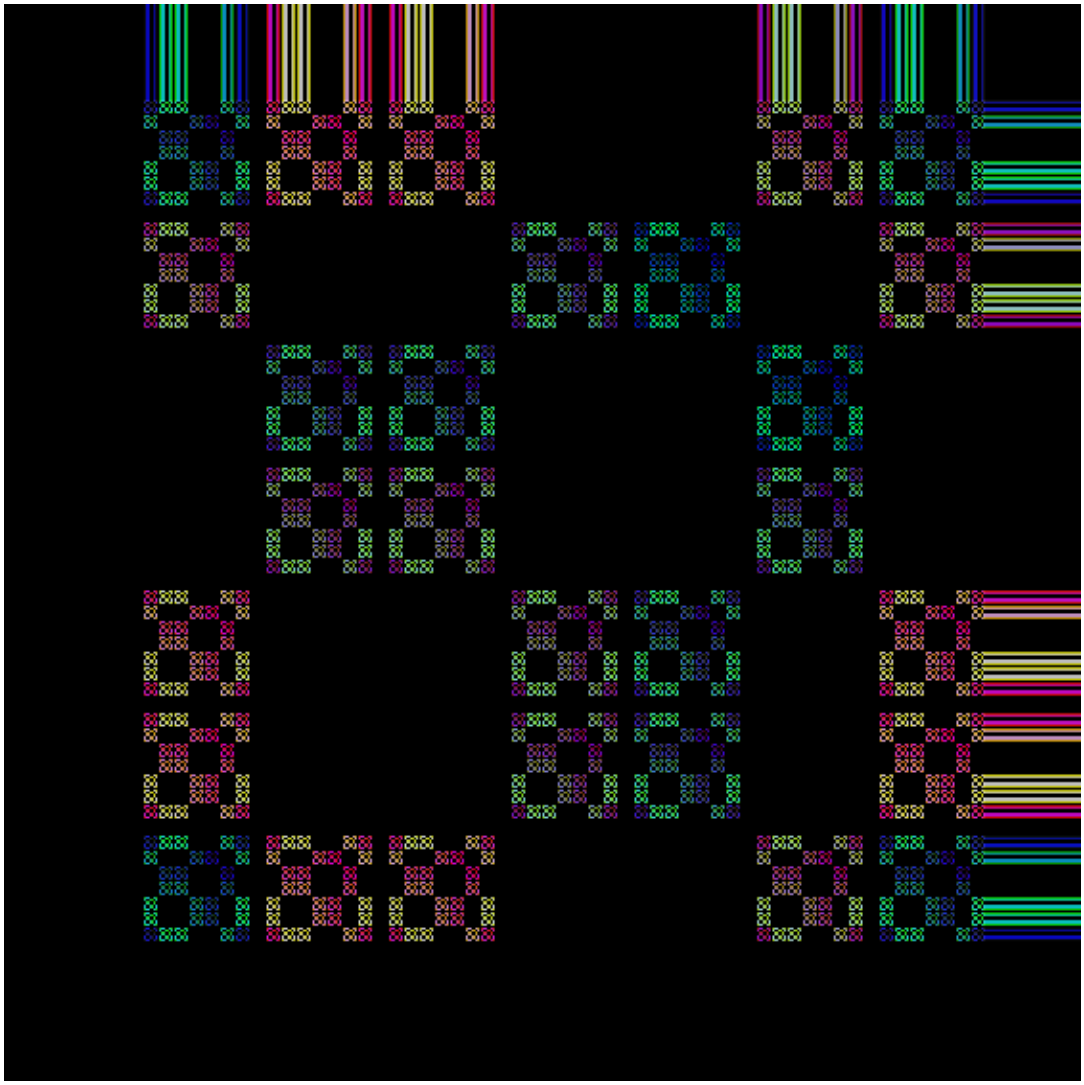
14 0.7330 −0.2787 −0.3205 0.3078 −0.5066 −0.9279 −0.8040 −0.6642



15 0.9474 −0.1938 0.1967 −0.4890 0.7569 0.6367 −0.2514 −0.3475



16 −0.8982 0.05023 0.7351 0.7260 −0.2377 −0.5135 0.5459 0.08102



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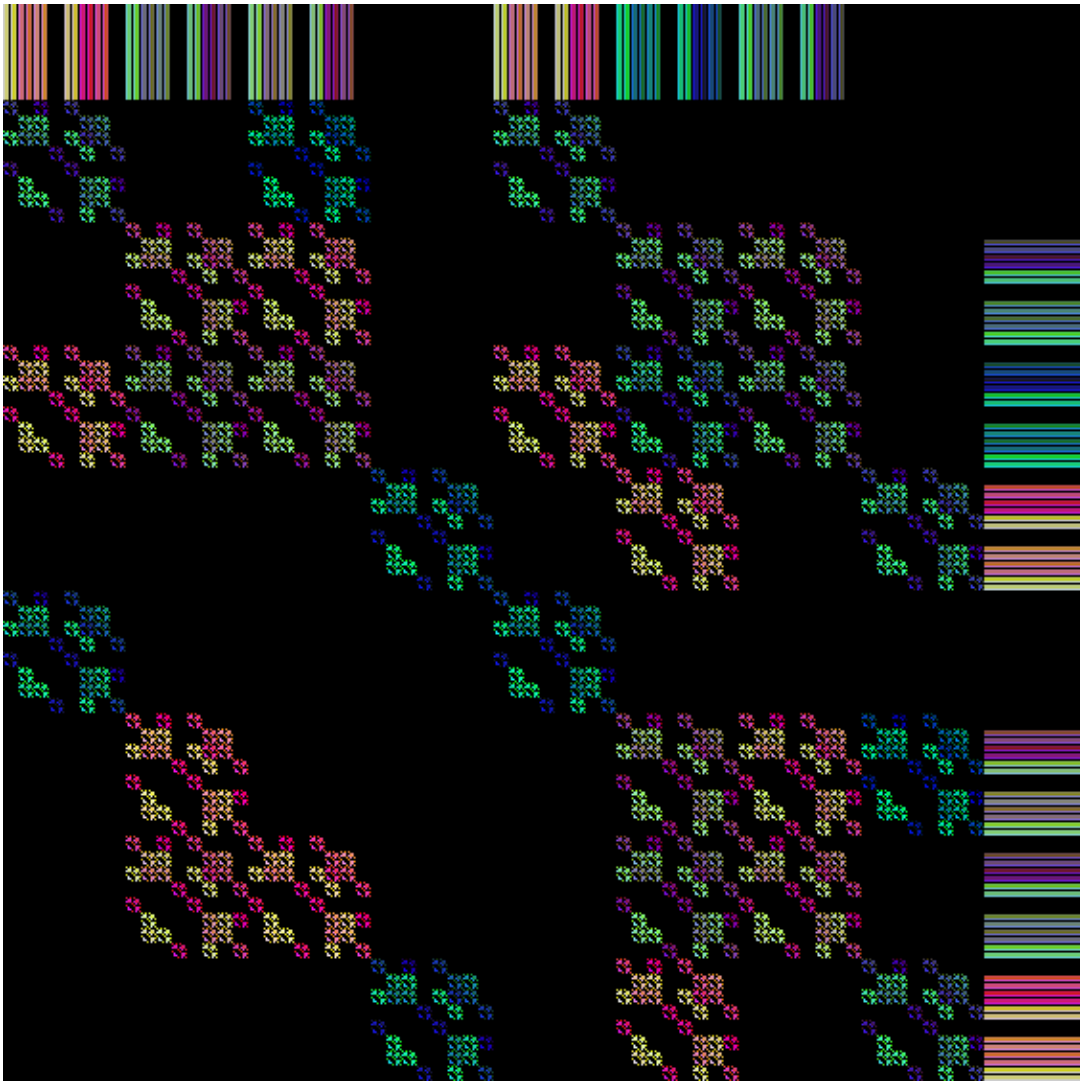
17   0.7840   0.4279   0.5177   -0.6661   0.7470   0.1025   0.2956   -0.5036
```



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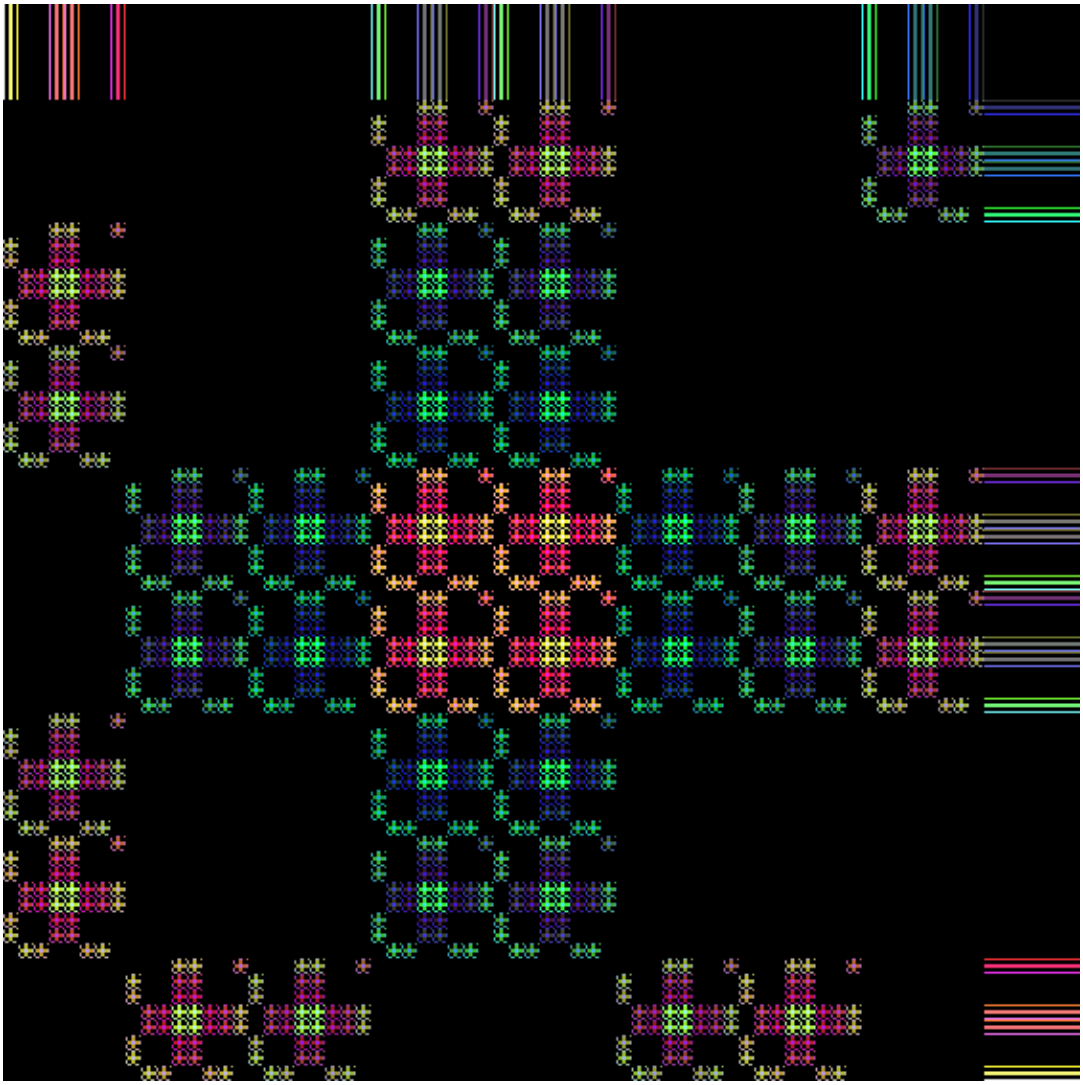
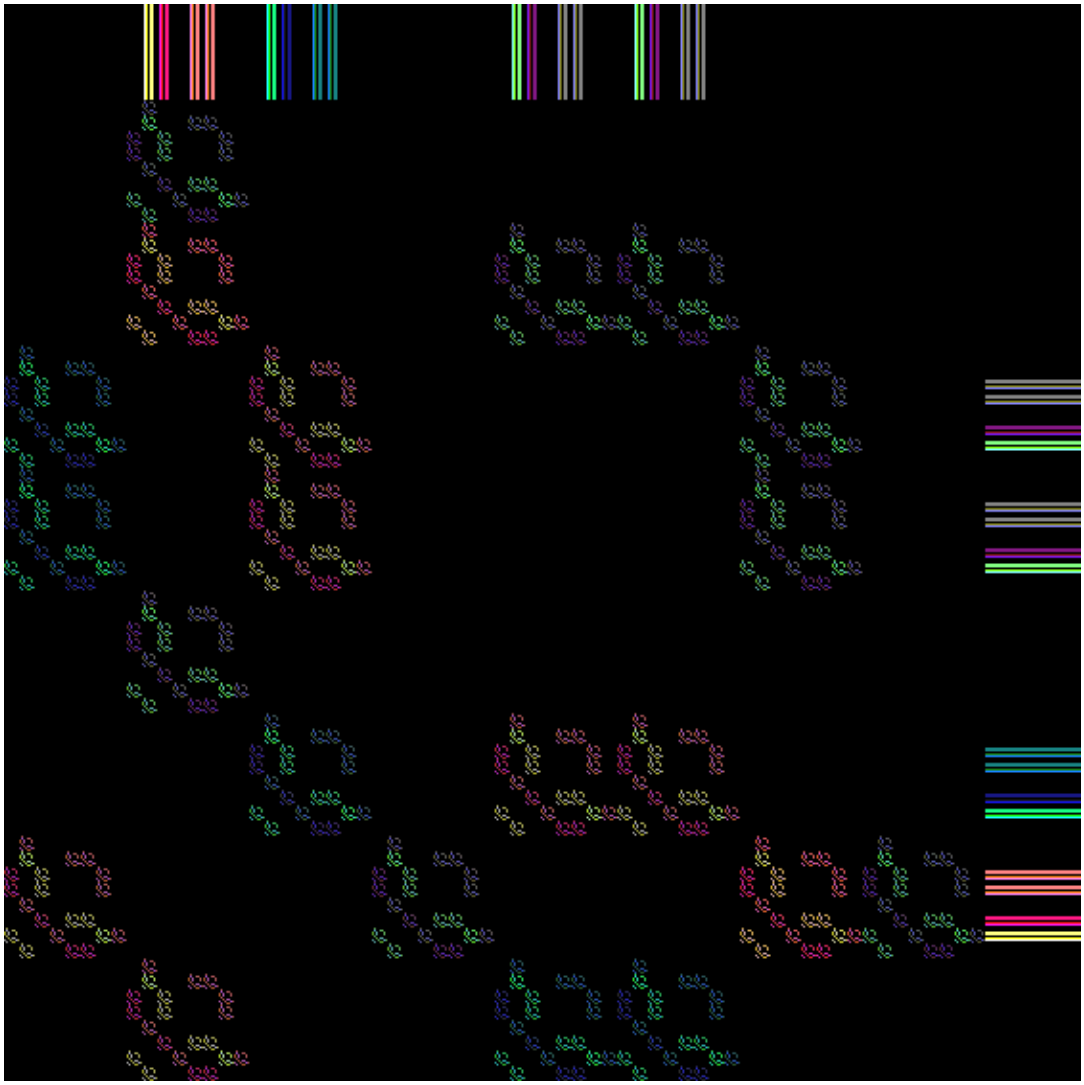
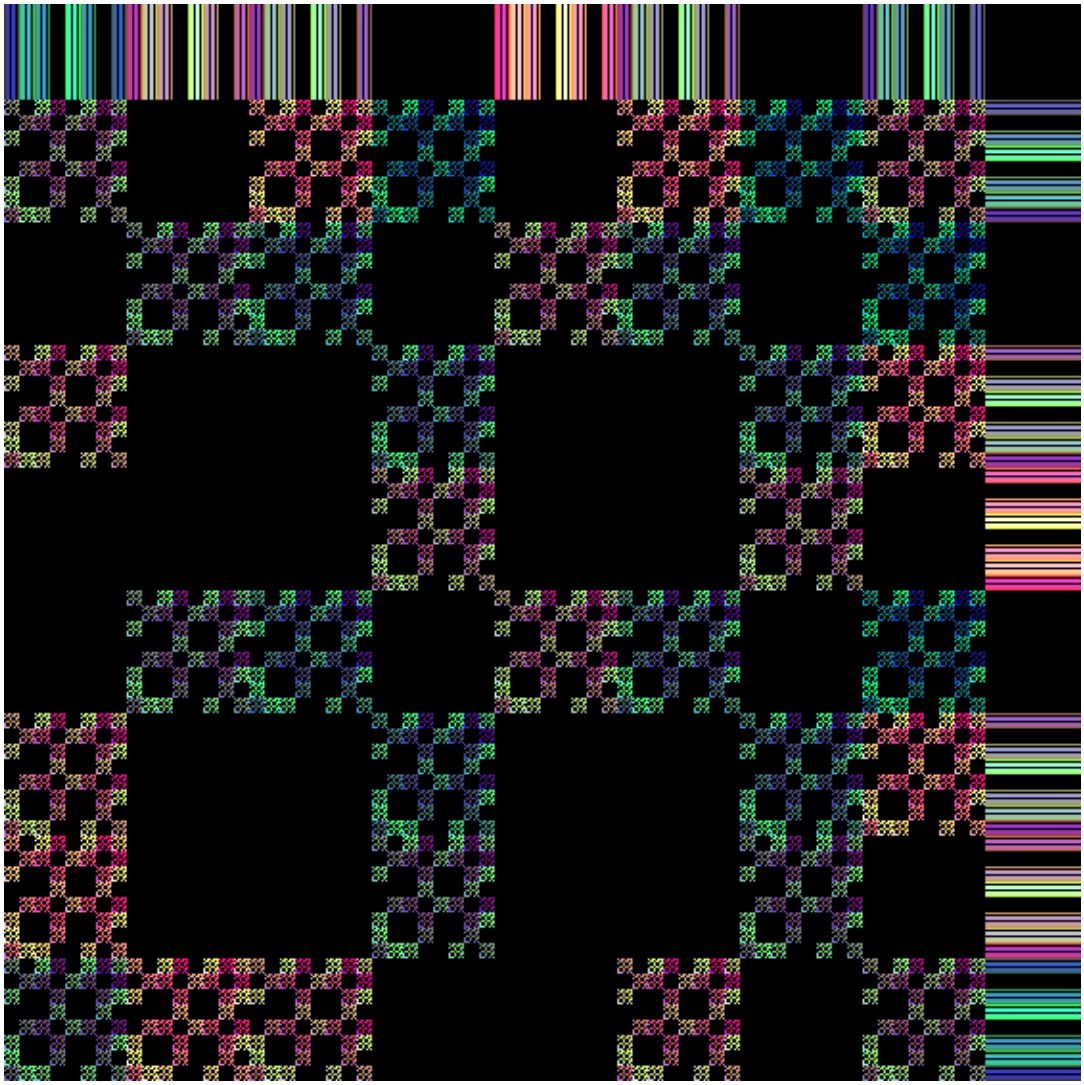
18   0.9412   -0.2117   -0.3311   0.4501   0.4688   -0.3502   -0.2441   0.1941
```



19 −0.3396 0.9948 0.1179 −0.6204 0.5266 0.5122 −0.1824 −0.6776



20 0.2294 0.7708 0.6053 −0.2930 0.9945 0.6143 −0.3015 0.3931



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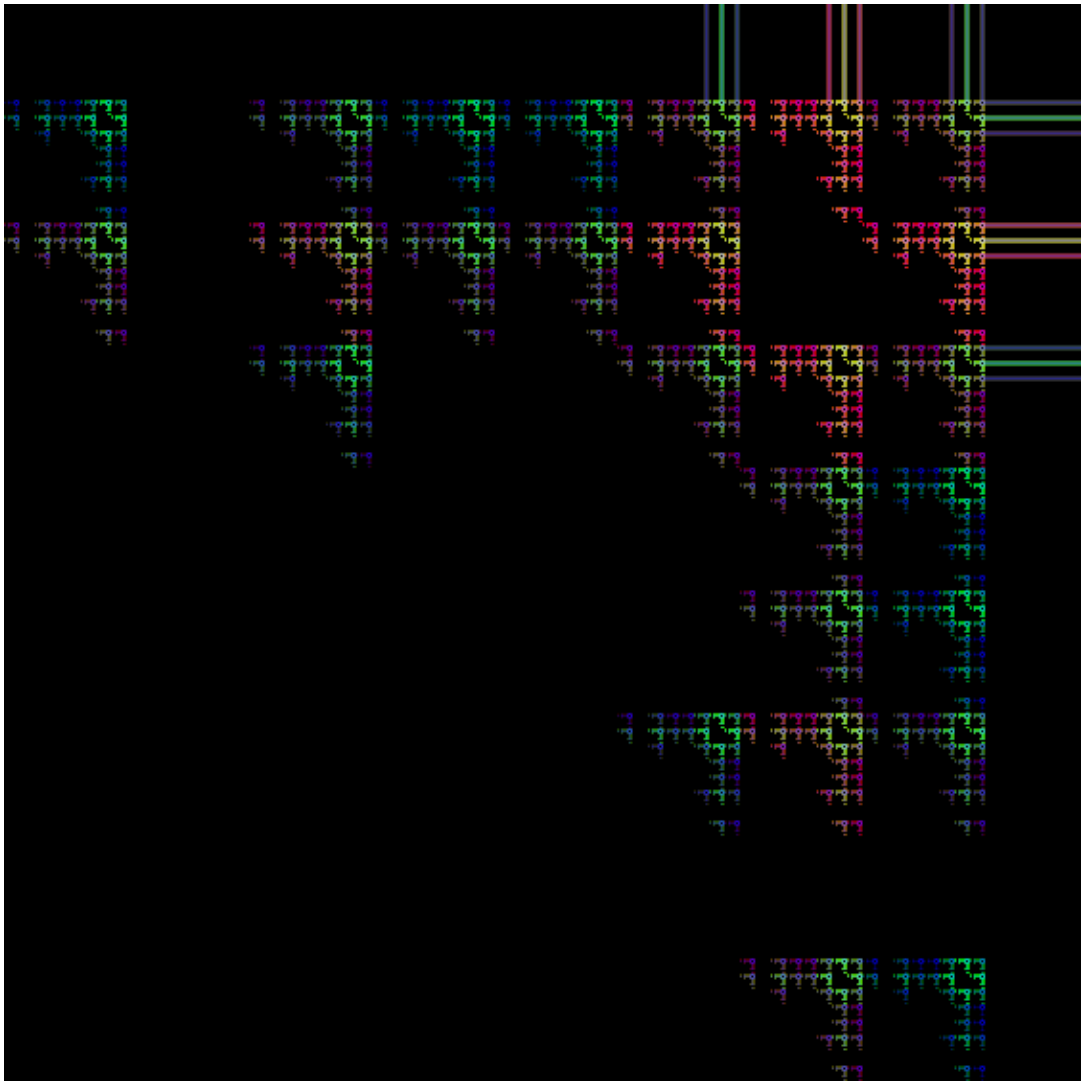
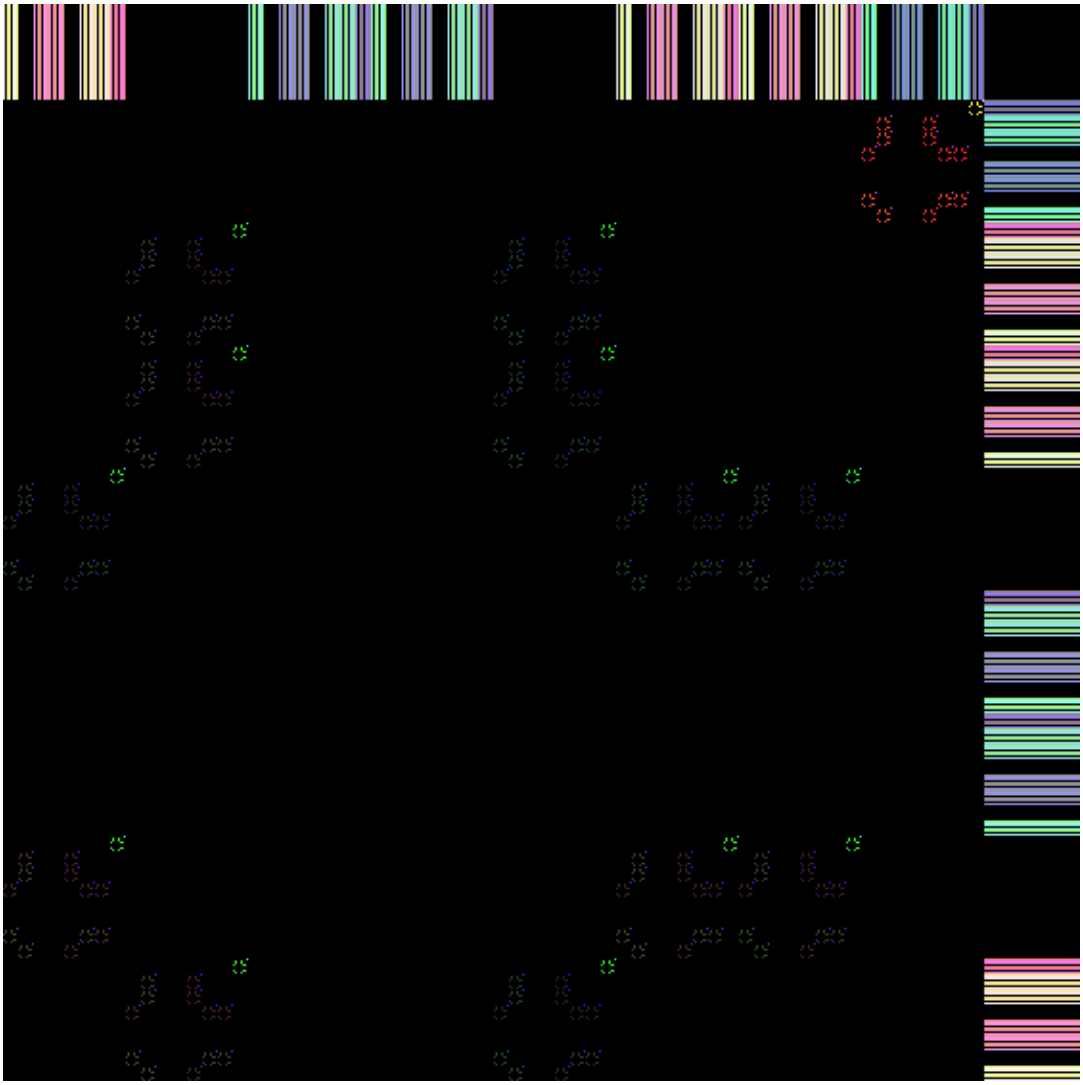
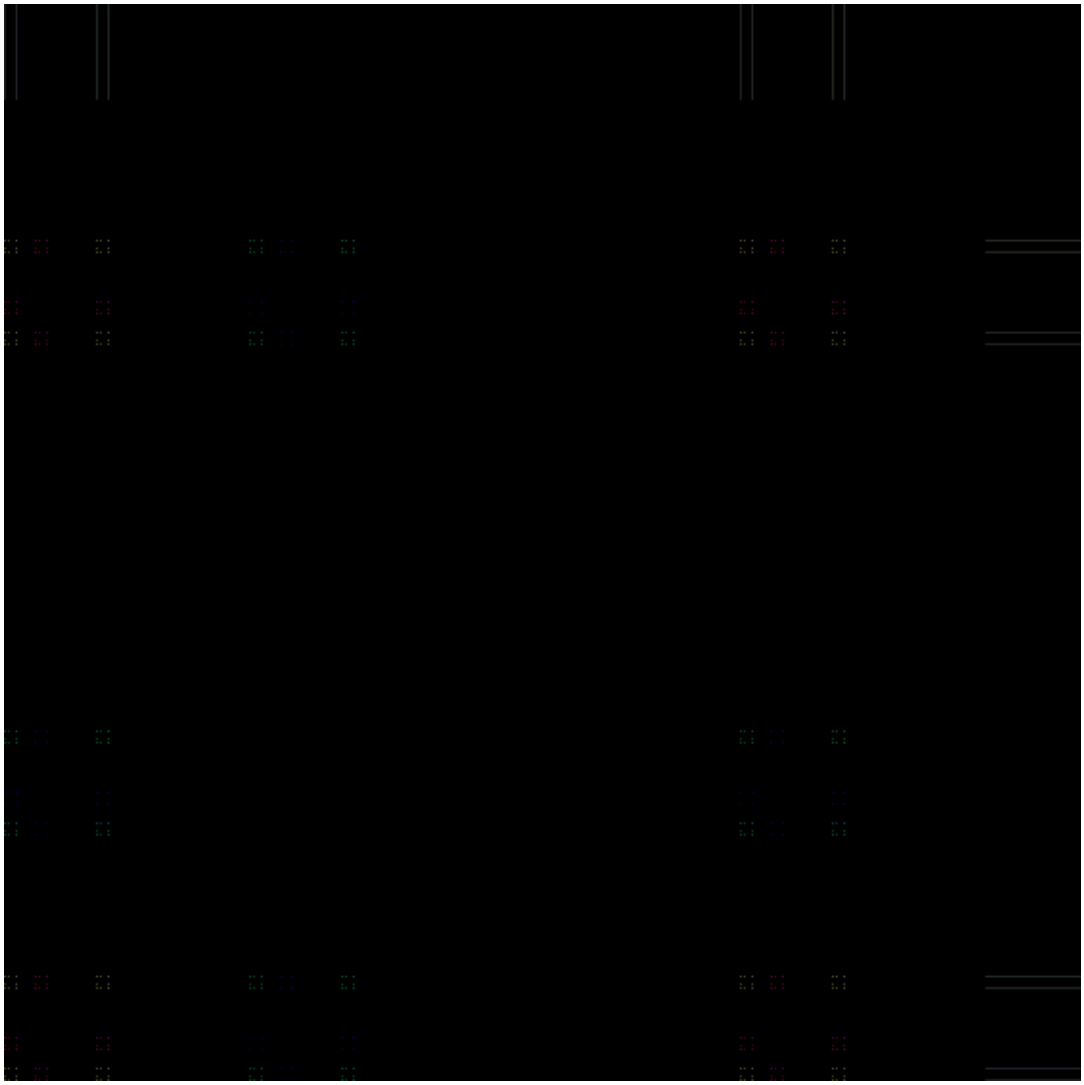
21   -0.2239   -0.8958   -0.03421   -0.2451   -0.2299   0.1702   0.5201   0.2404
```



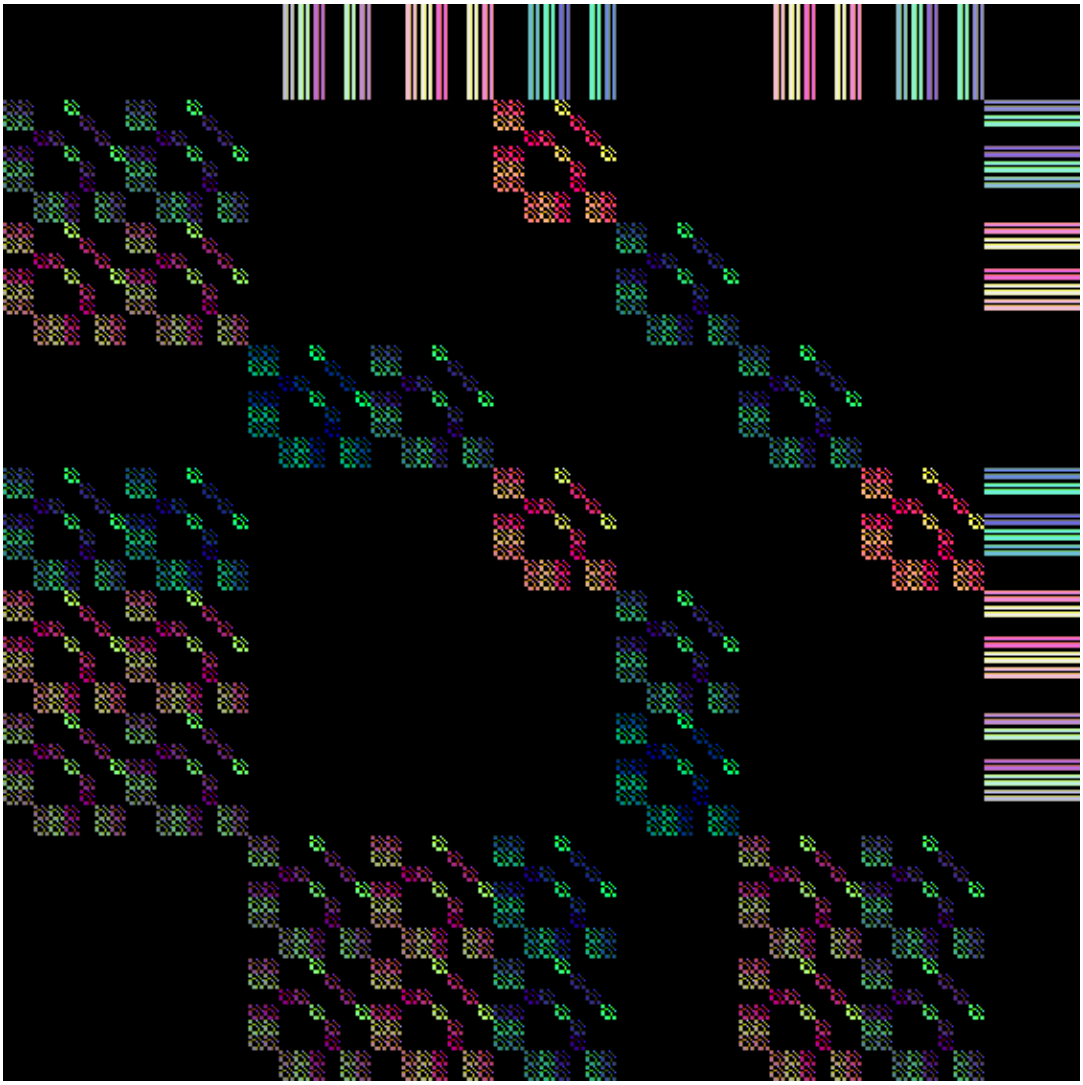
22 0.9381 −0.6353 0.5841 0.5700 −0.7549 0.8940 0.8839 0.4775



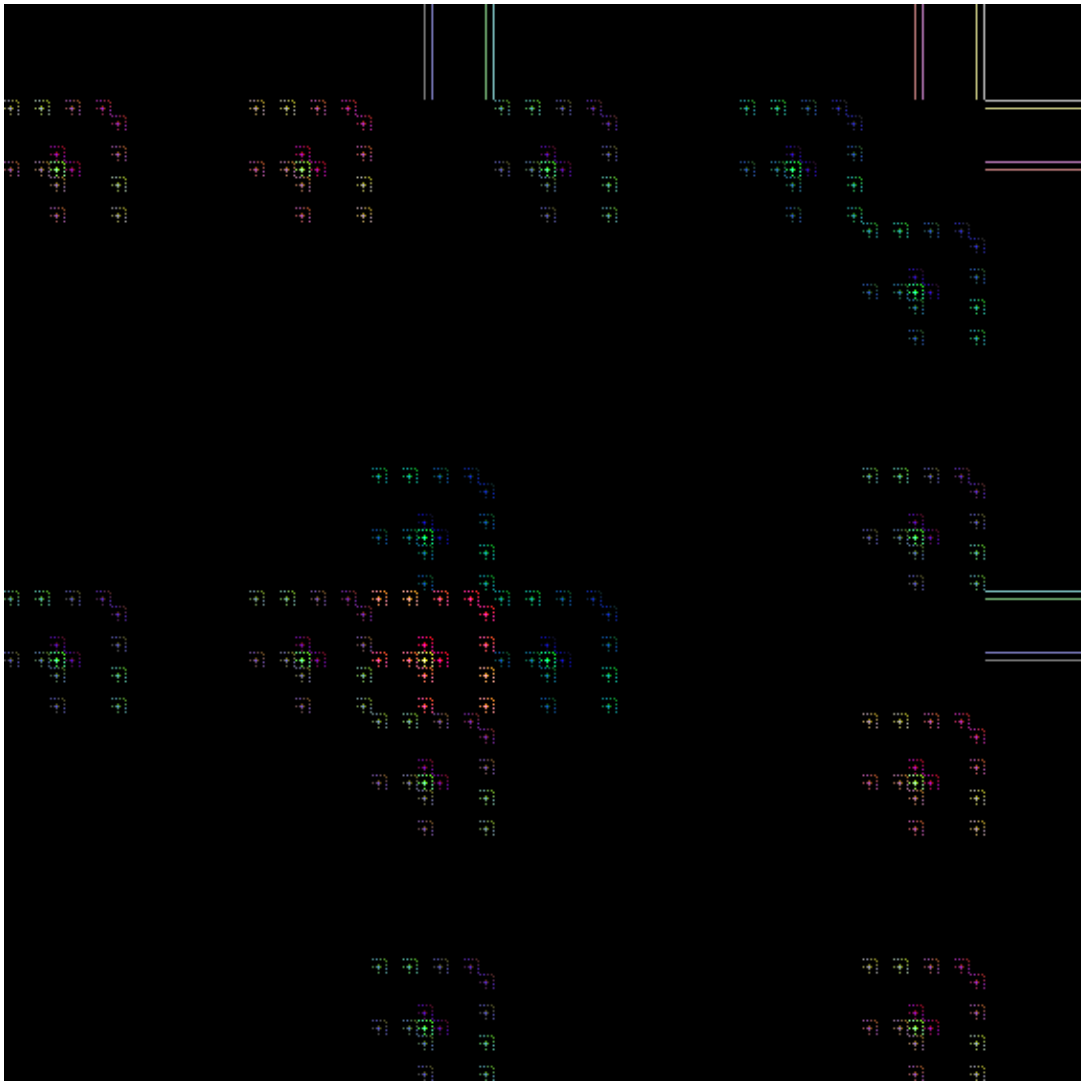
23 0.1416 −0.7950 −0.1139 −0.4727 −0.8343 −0.3395 0.1585 −0.5327



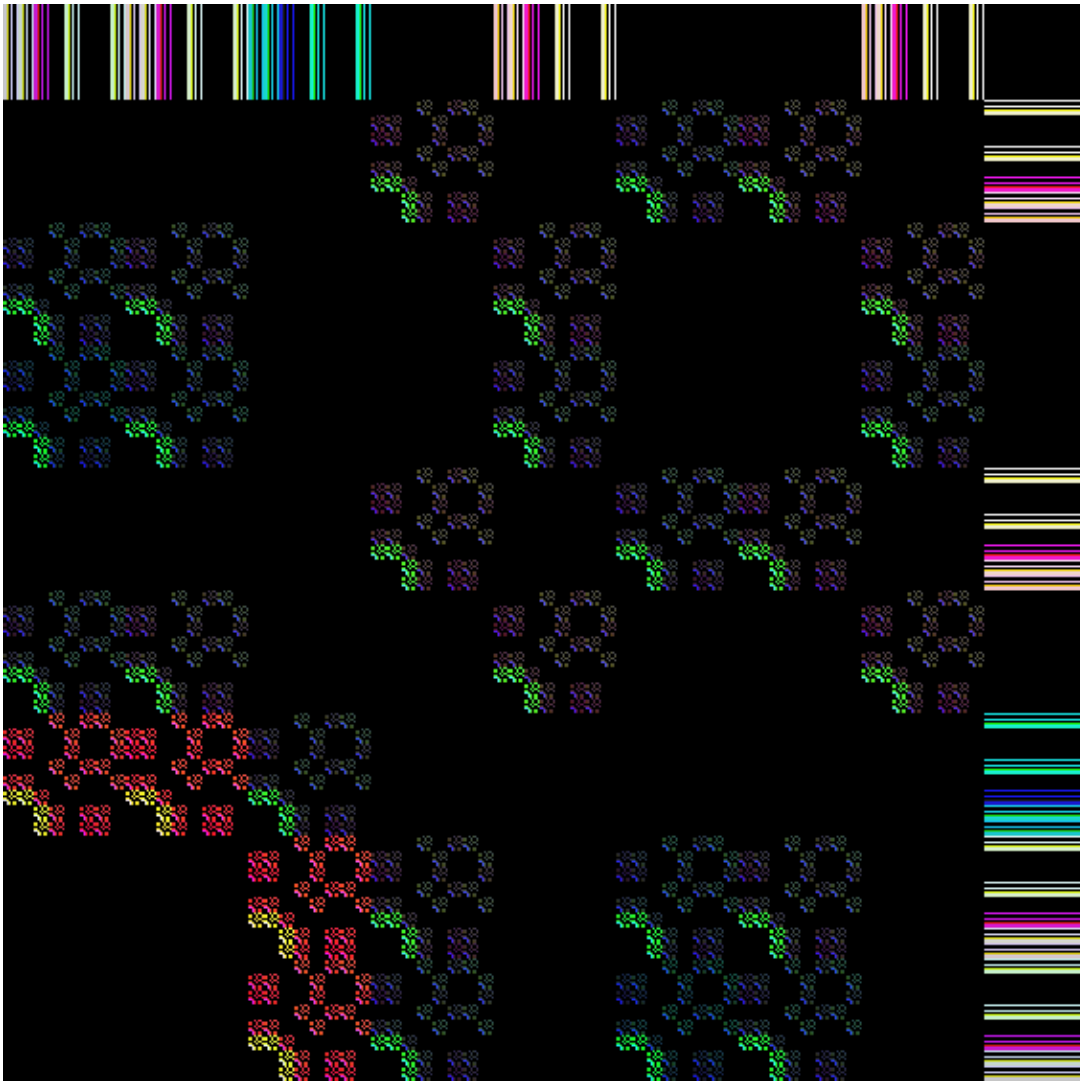
24 −0.2261 −0.3029 0.7377 0.9337 0.4237 −0.7417 0.9138 0.5577



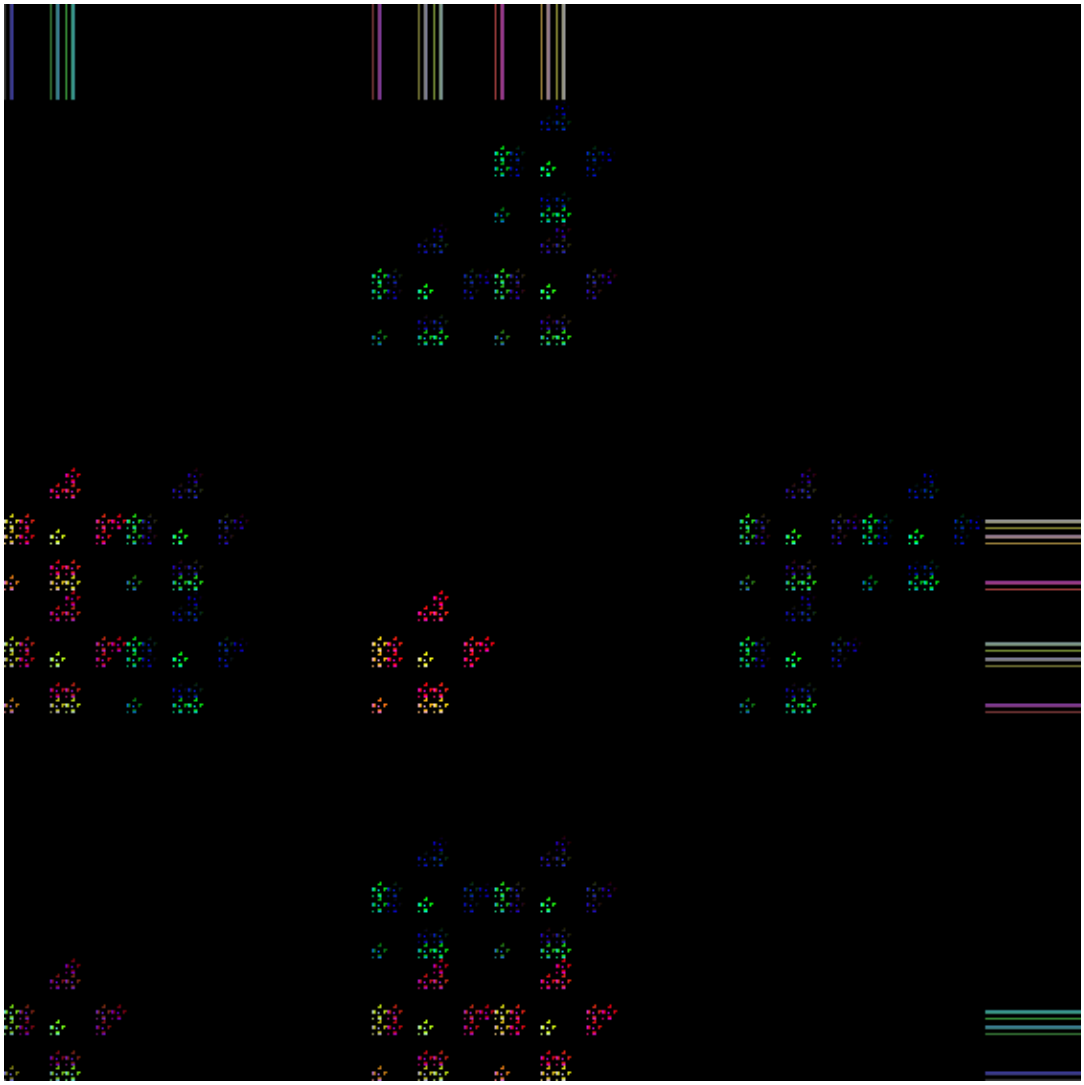
25 −0.1537 −0.9830 −0.04156 0.4941 −0.4087 −0.8593 −0.5434 0.7249



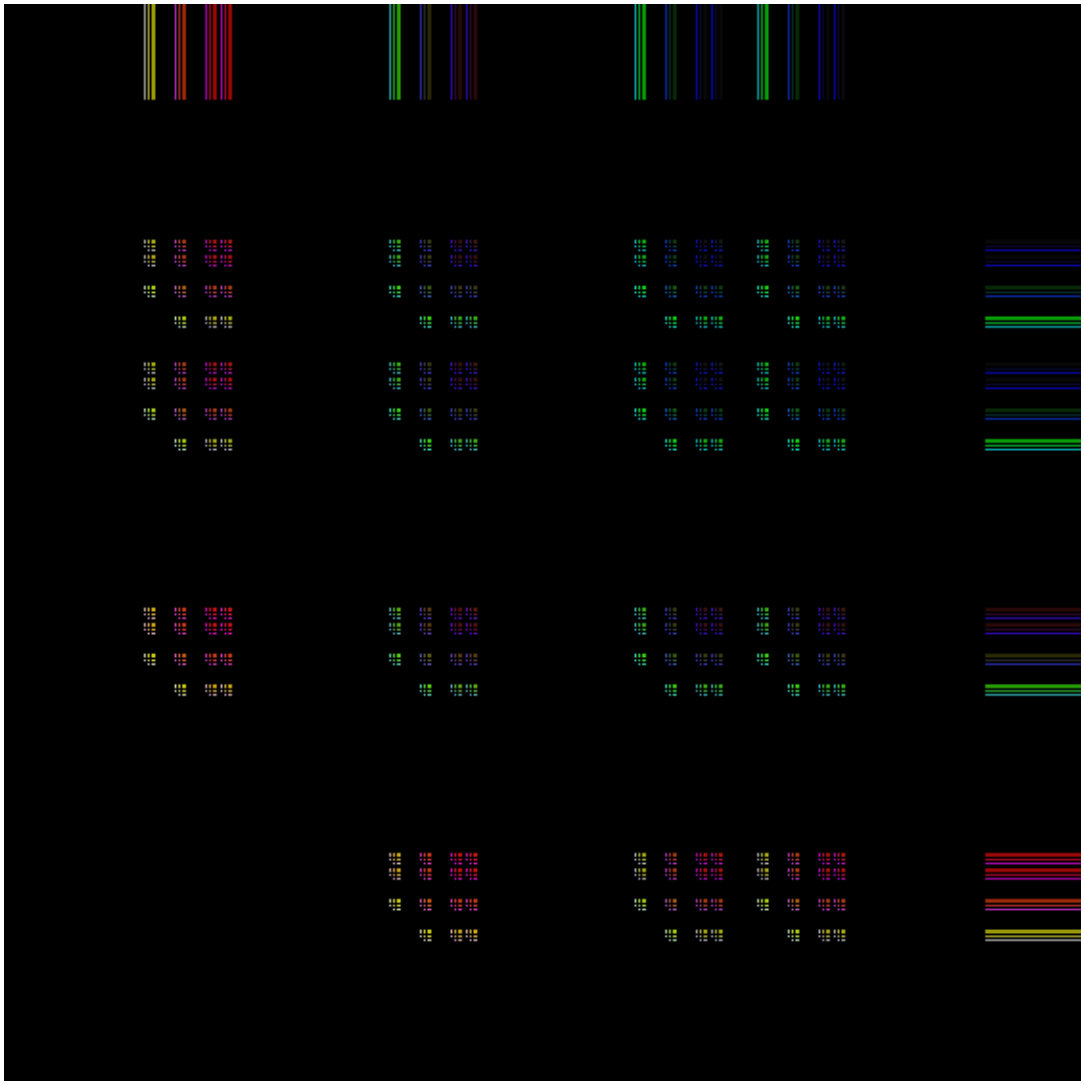
26 0.7804 0.8423 0.1177 −0.5870 0.9212 −0.6808 −0.6146 0.9272



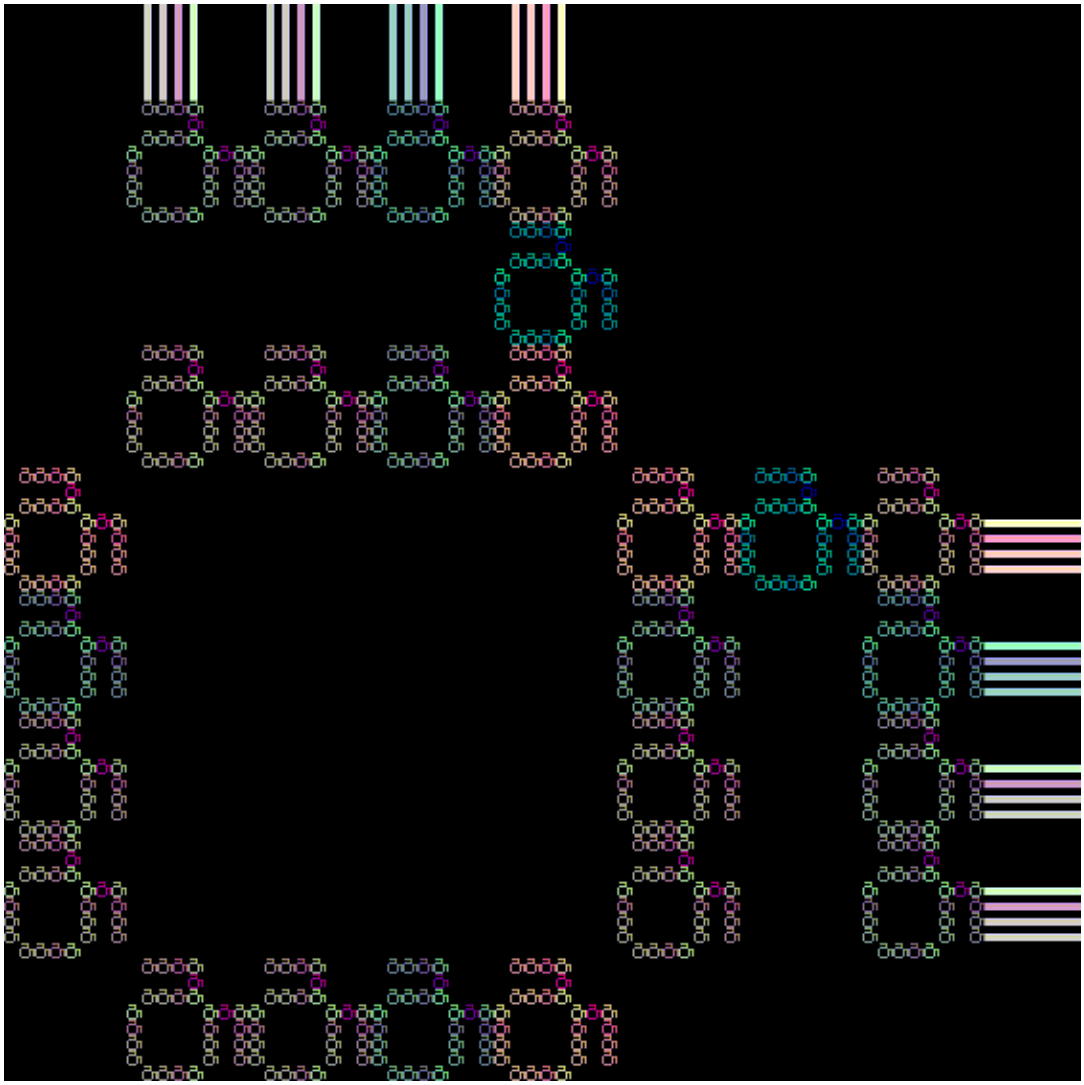
27 0.2309 −0.4459 −0.9985 0.4831 0.5892 −0.9773 −0.4054 −0.6044



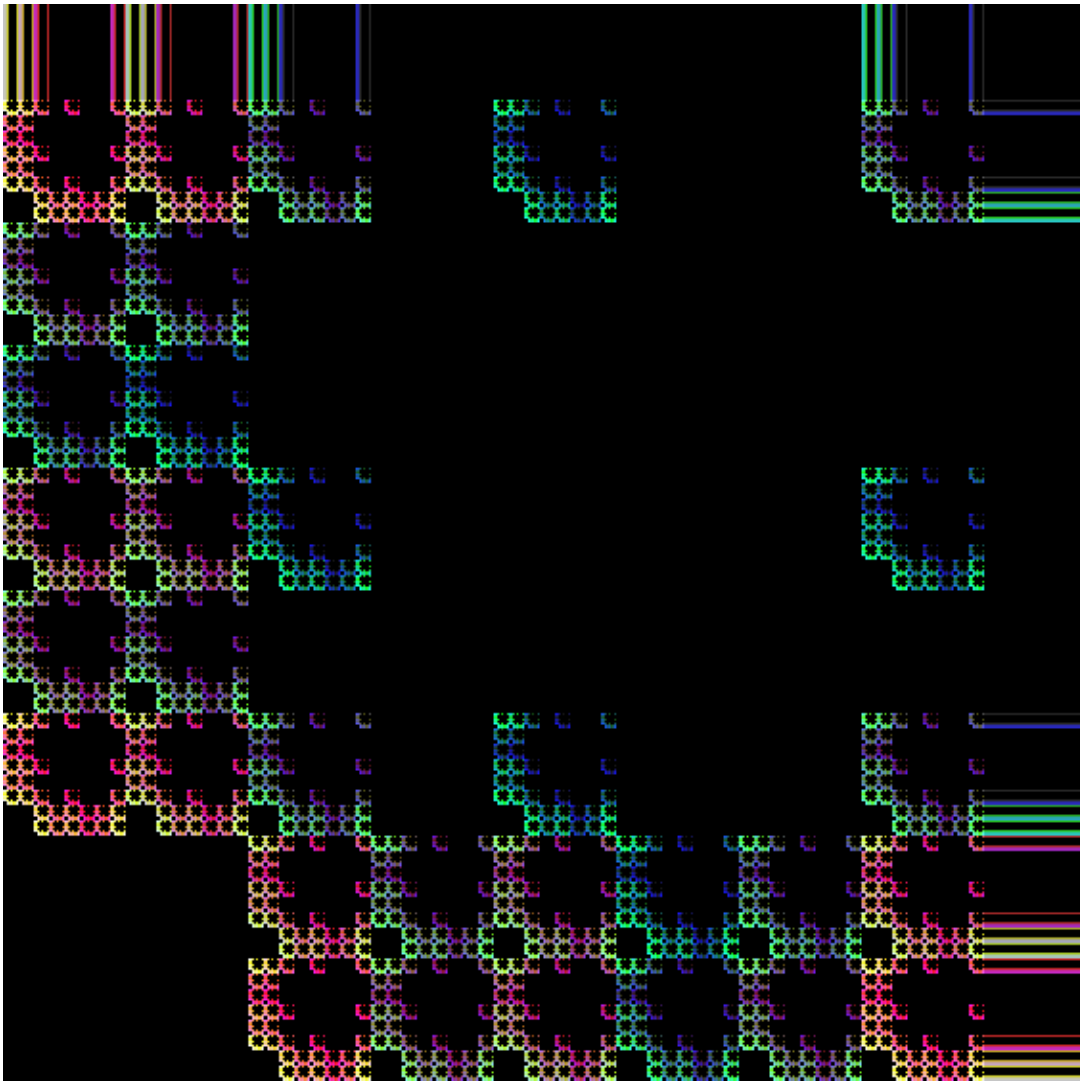
28 −0.8459 0.6155 −0.9934 0.1825 −0.8654 0.03864 0.05017 −0.7119



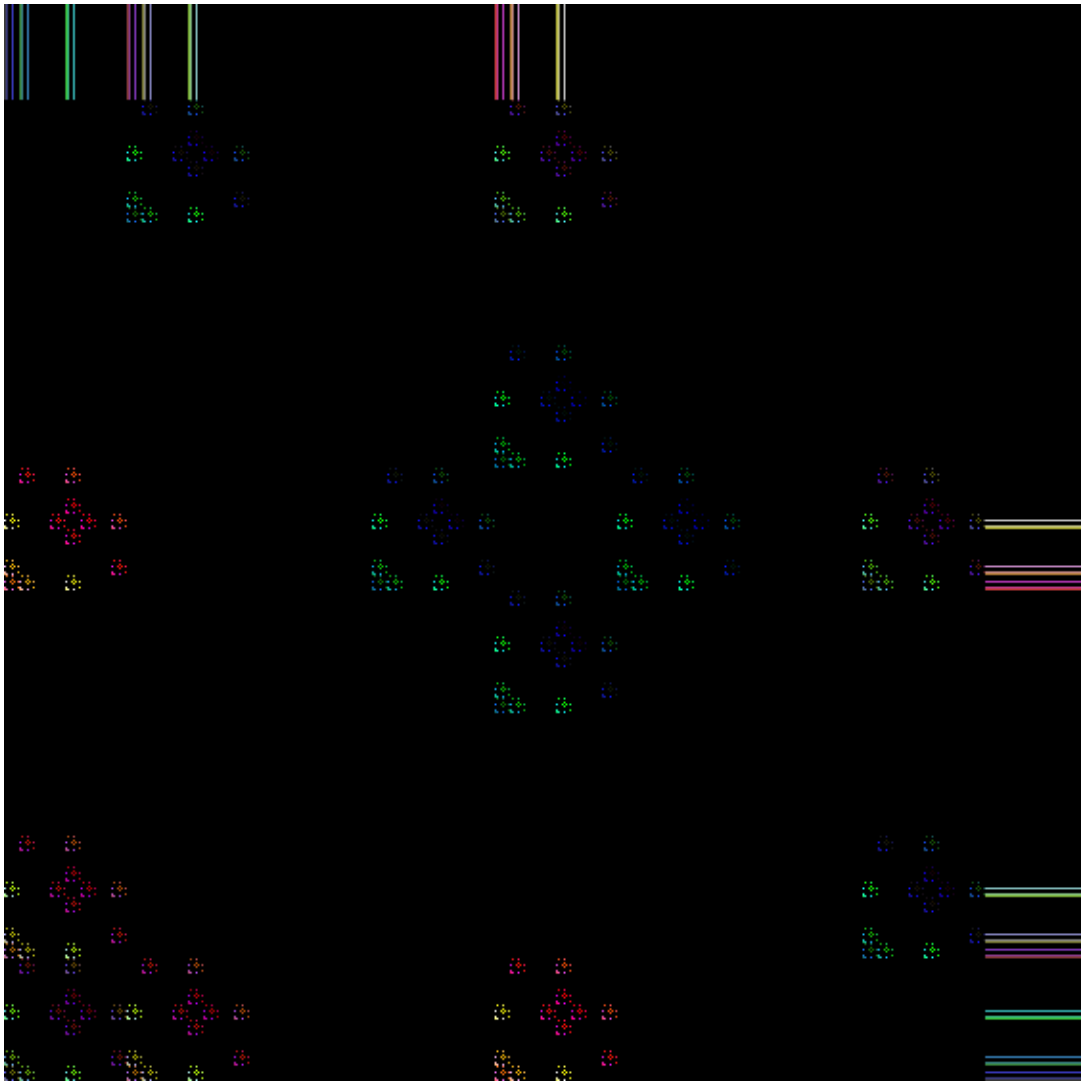
29 −0.1825 0.8219 0.8045 0.6146 0.9895 −0.1733 −0.9872 −0.2933



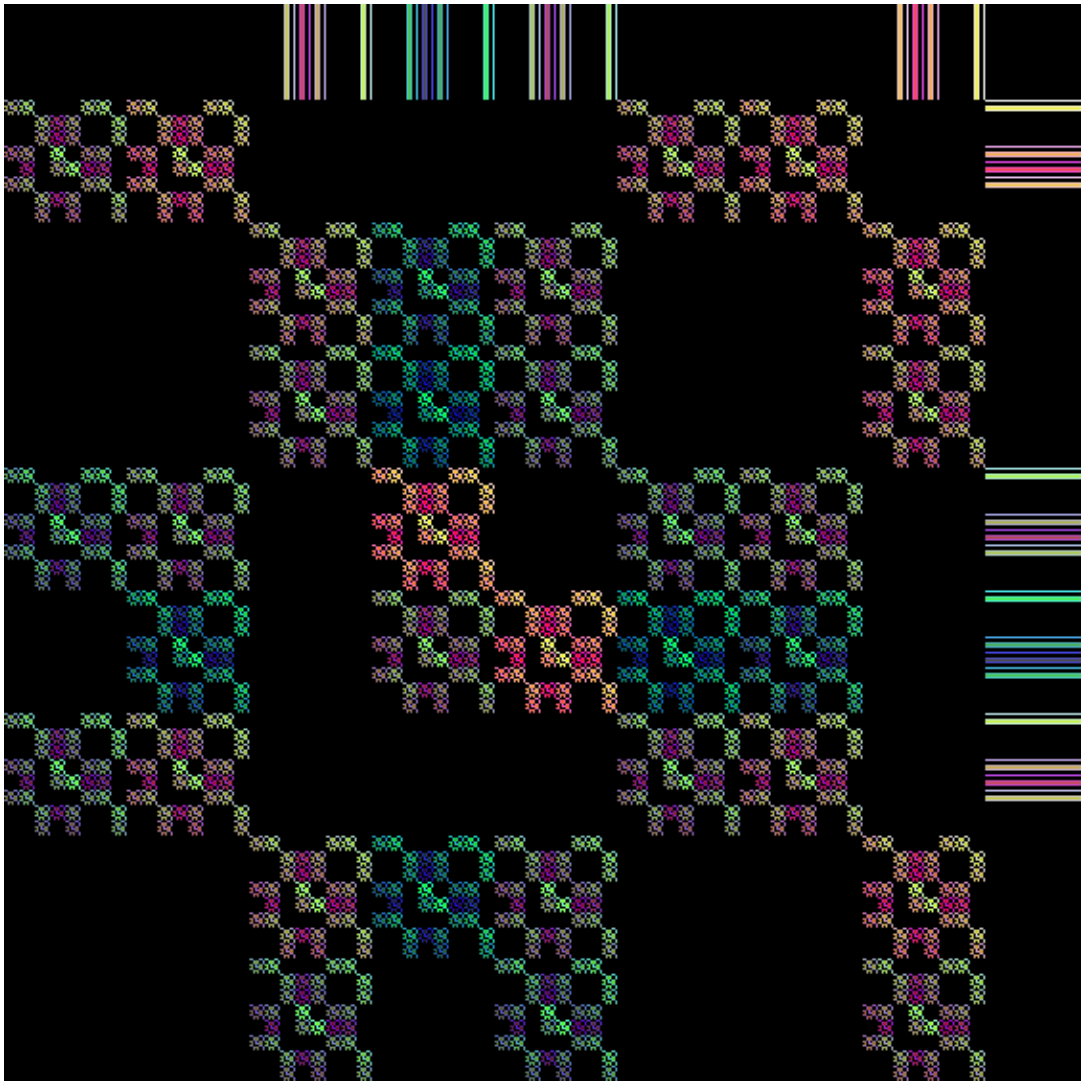
30 0.7626 0.6424 0.1811 −0.2081 −0.06390 −0.5213 −0.3094 0.1838



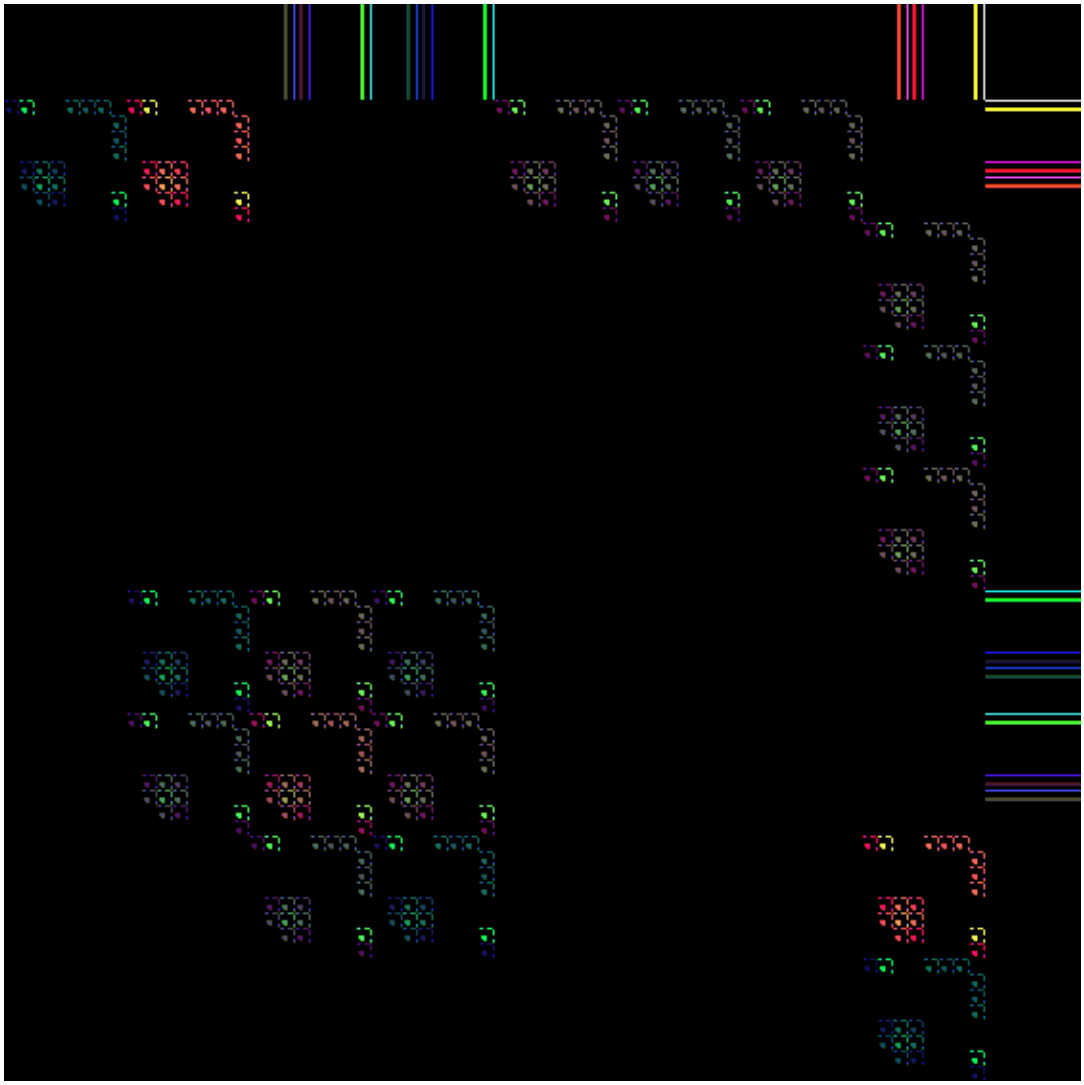
```
31   0.2251   0.5157   -0.9050   -0.6743   0.7458   -0.7221   -0.7751   -0.4217
```



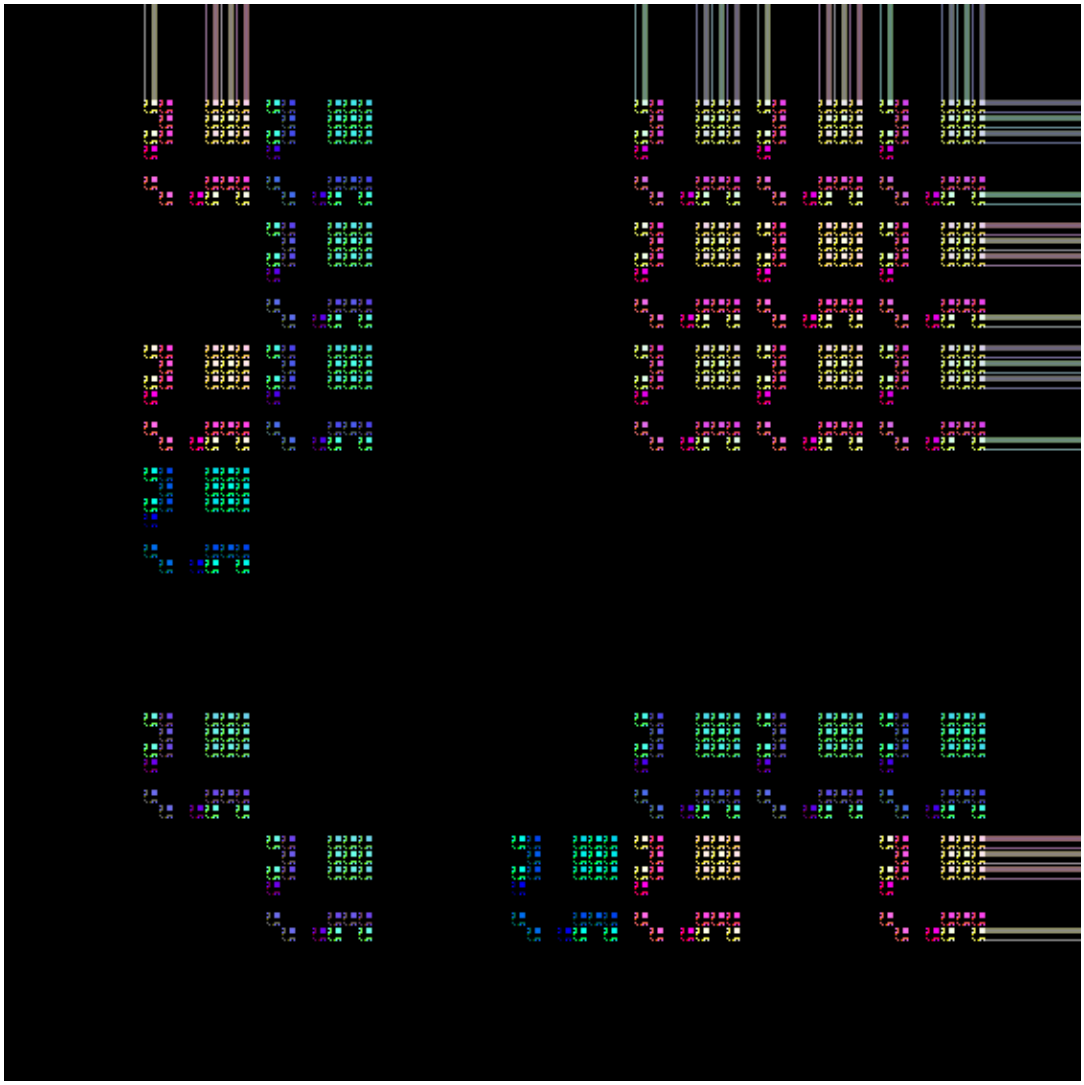
```
32   -0.3120   -0.1347   0.7668   0.2904   0.6594   -0.2102   -0.08969   0.9309
```



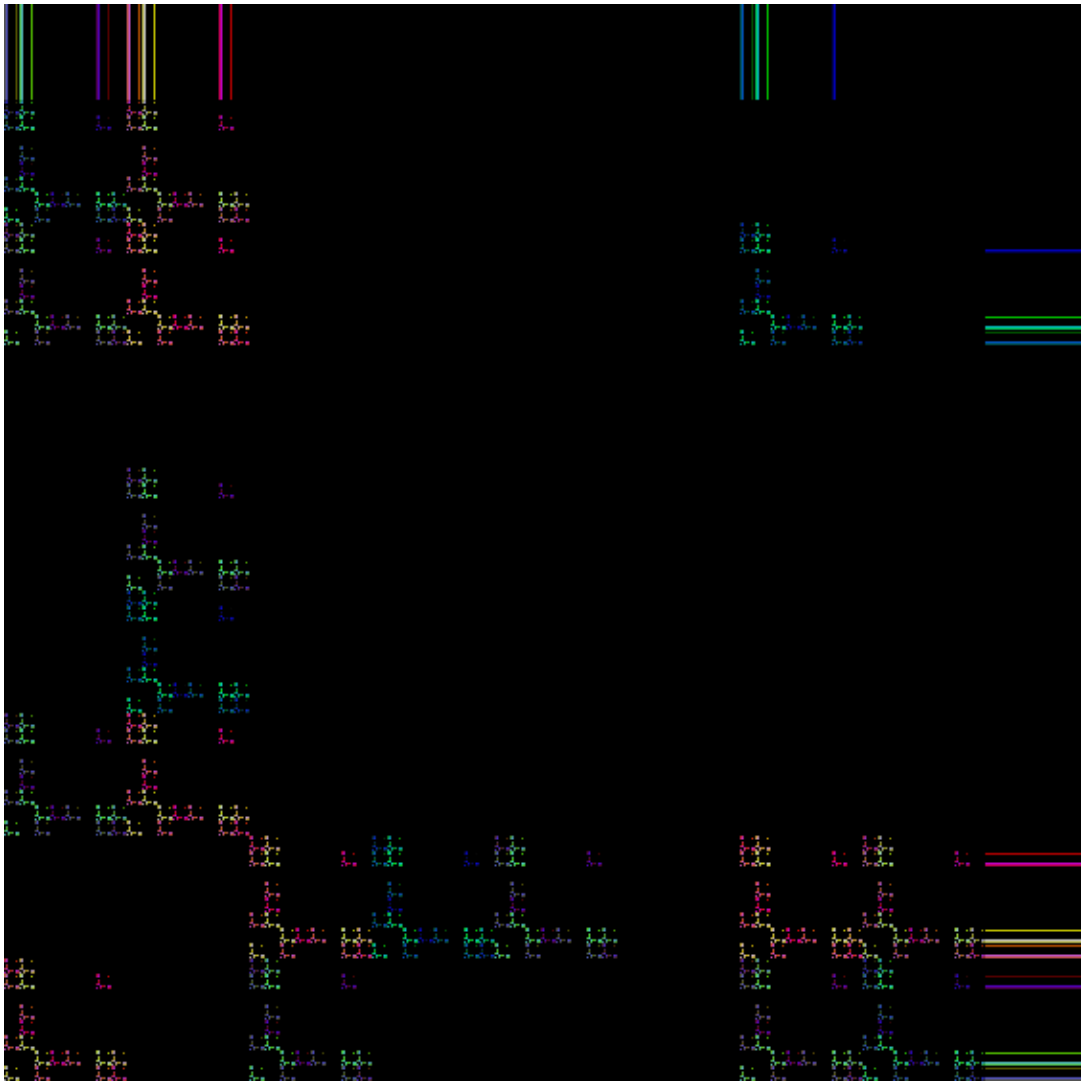
```
33   -0.8730   -0.01303   0.3015   0.1184   -0.5242   -0.6152   -0.5616   0.9452
```



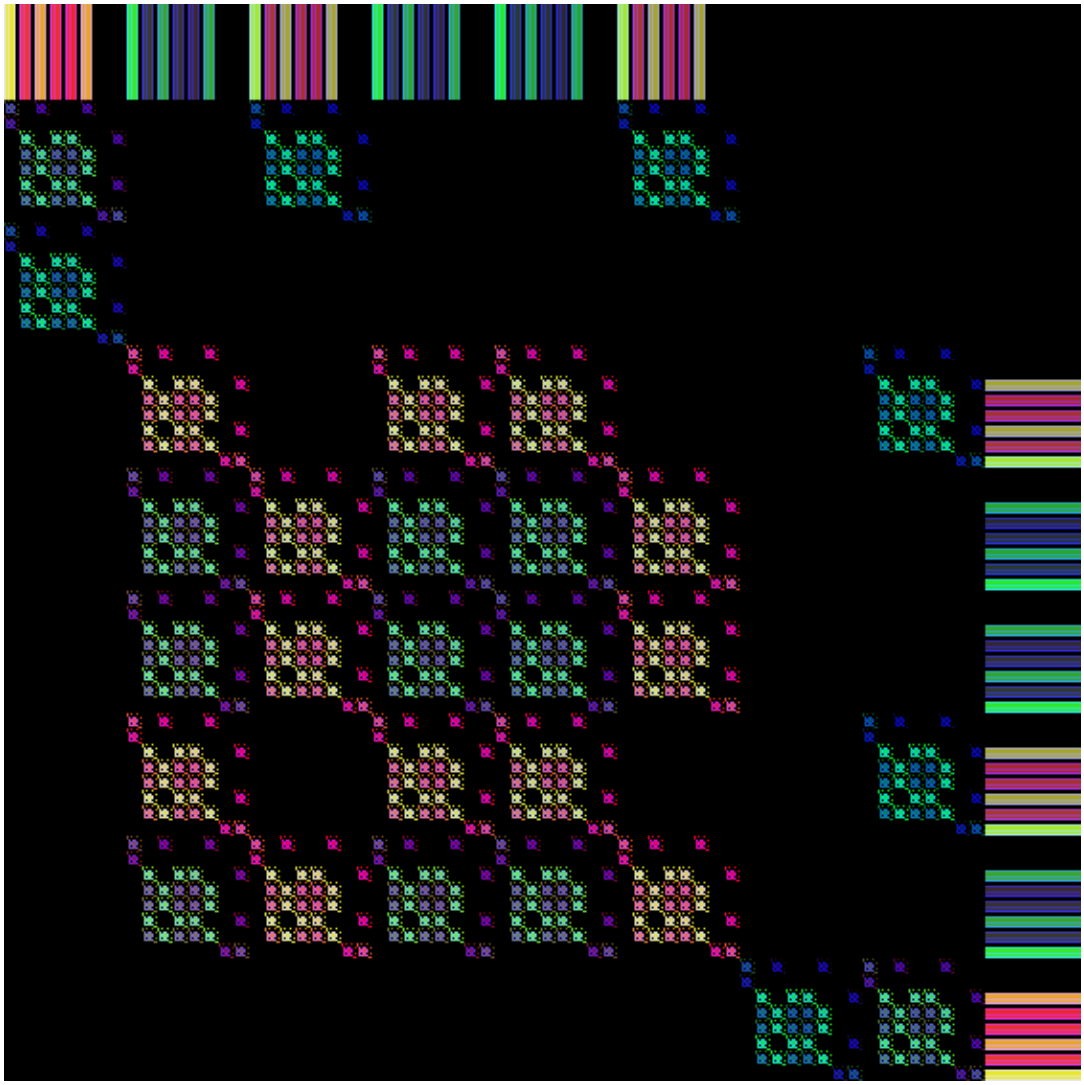
34 −0.5944 0.5474 −0.1379 −0.9829 −0.5308 0.4322 0.5007 0.4034



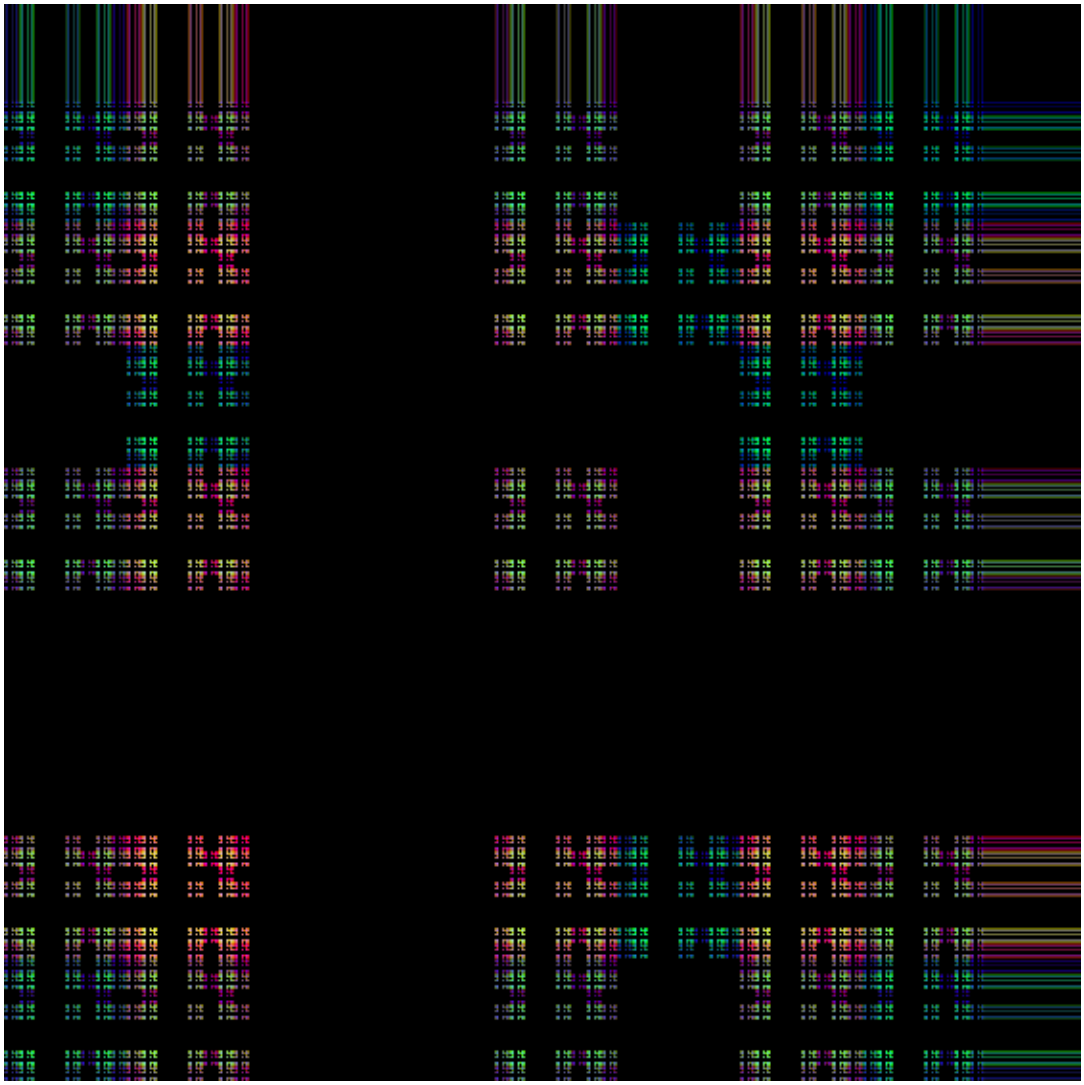
35 0.3381 0.7426 −0.03174 −0.6812 −0.4480 −0.8410 0.01981 −0.1752



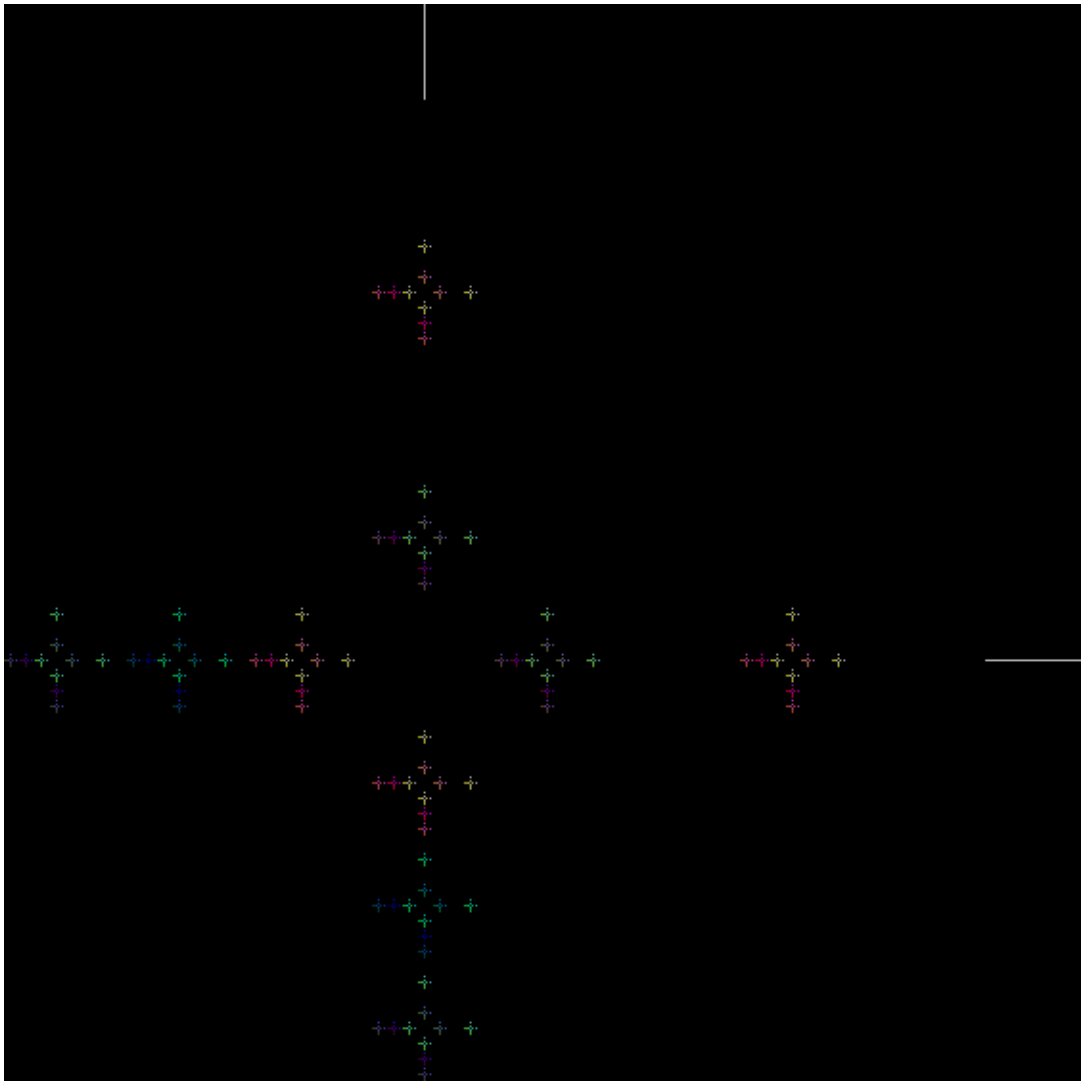
36 0.8781 0.2422 0.6311 0.1987 0.1735 0.6261 −0.7609 −0.5696



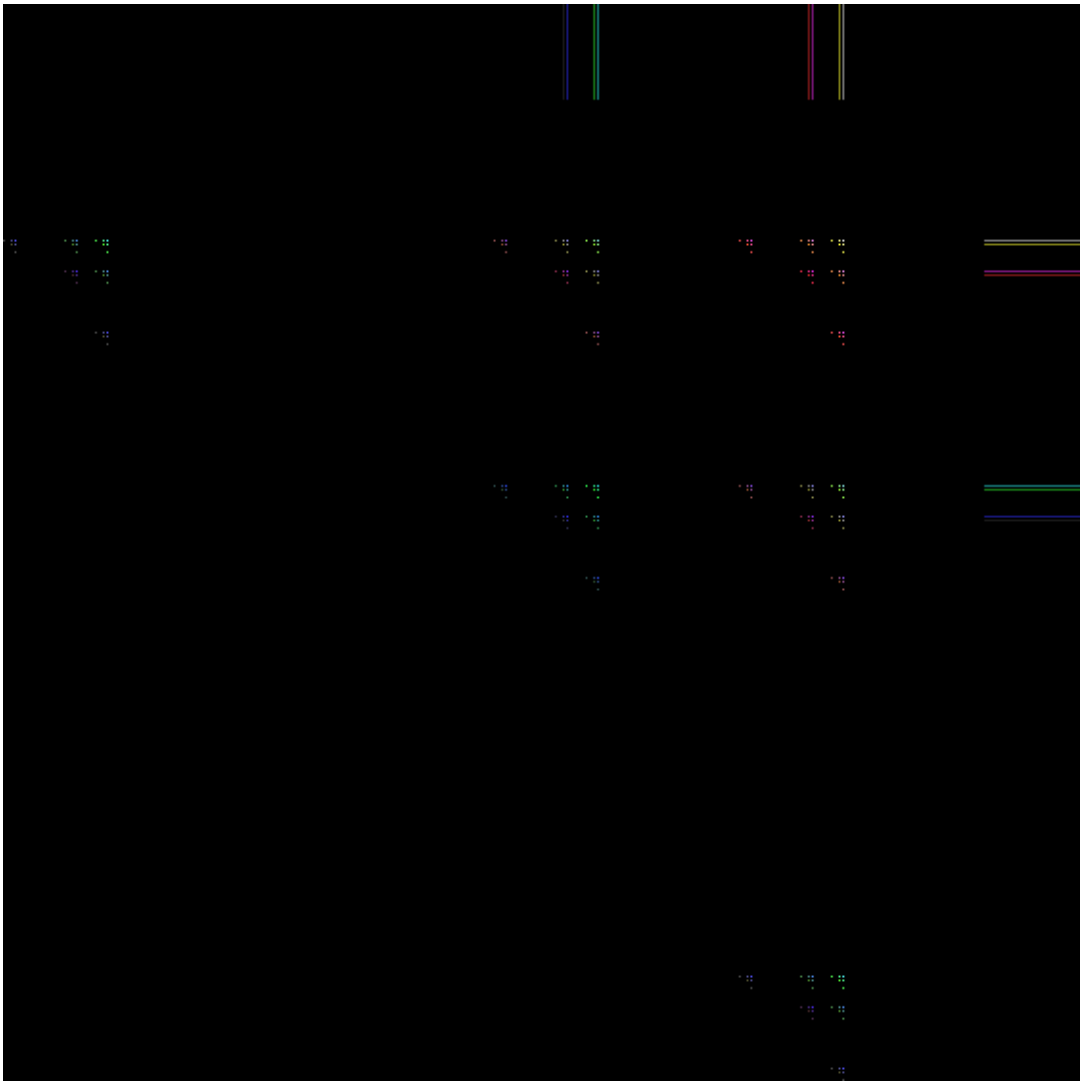
37 0.09073 0.4273 −0.5063 −0.5582 0.2375 −0.3377 0.3447 0.01306



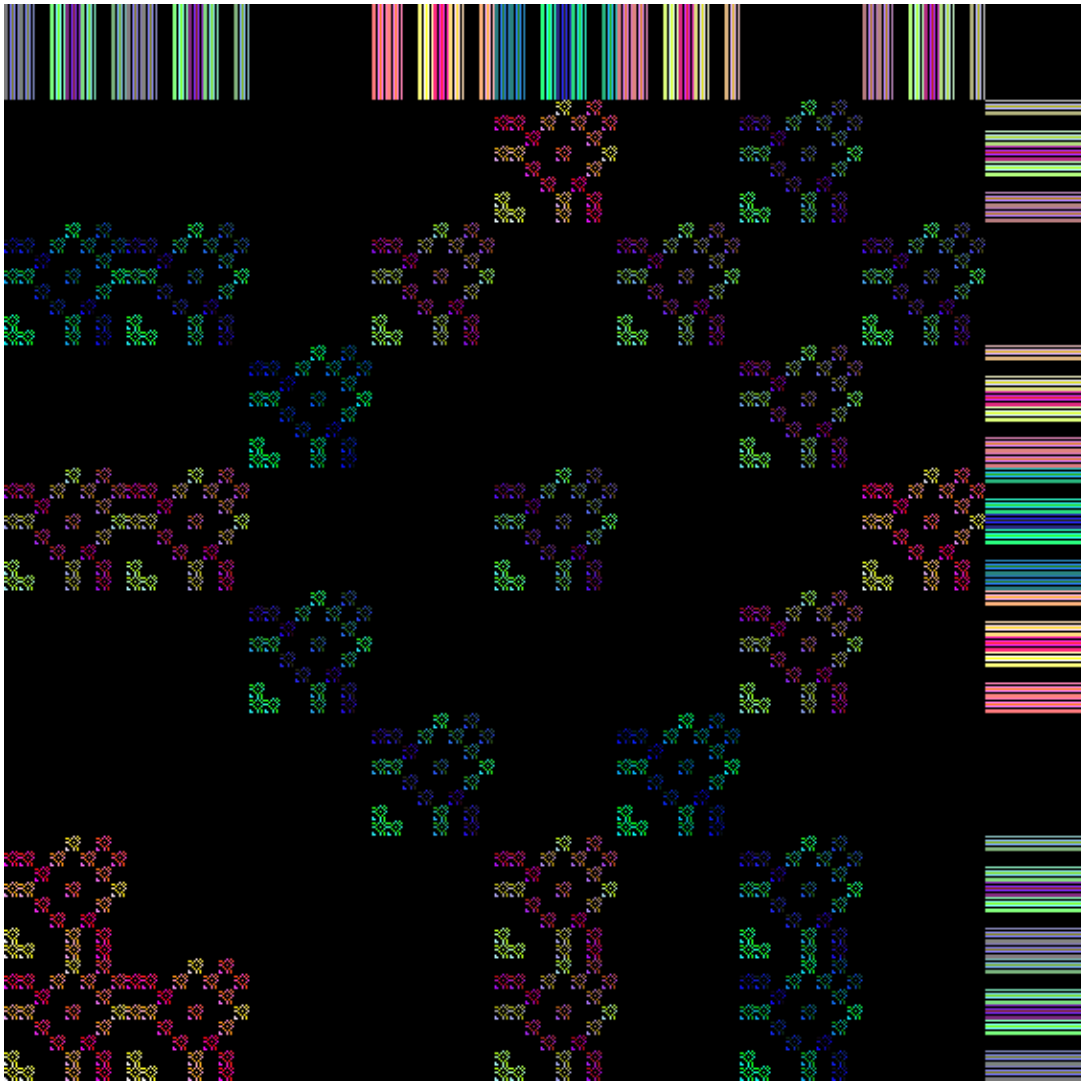
38 −0.4734 −0.7160 −0.08075 0.7159 −0.3605 −0.7980 −0.06345 −0.9183



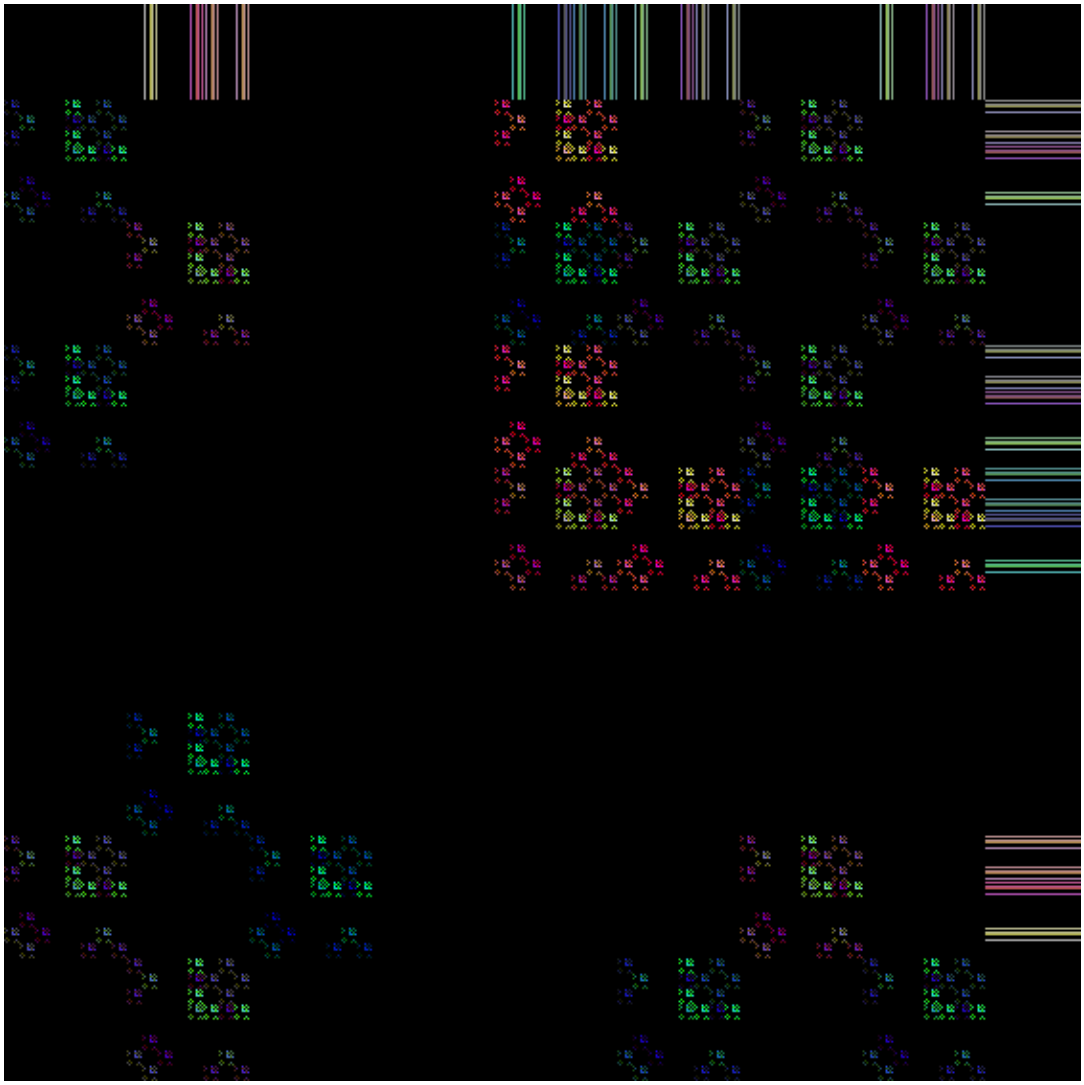
39 −0.1641 −0.9587 −0.6788 −0.5867 0.09668 −0.8648 0.4818 −0.6045



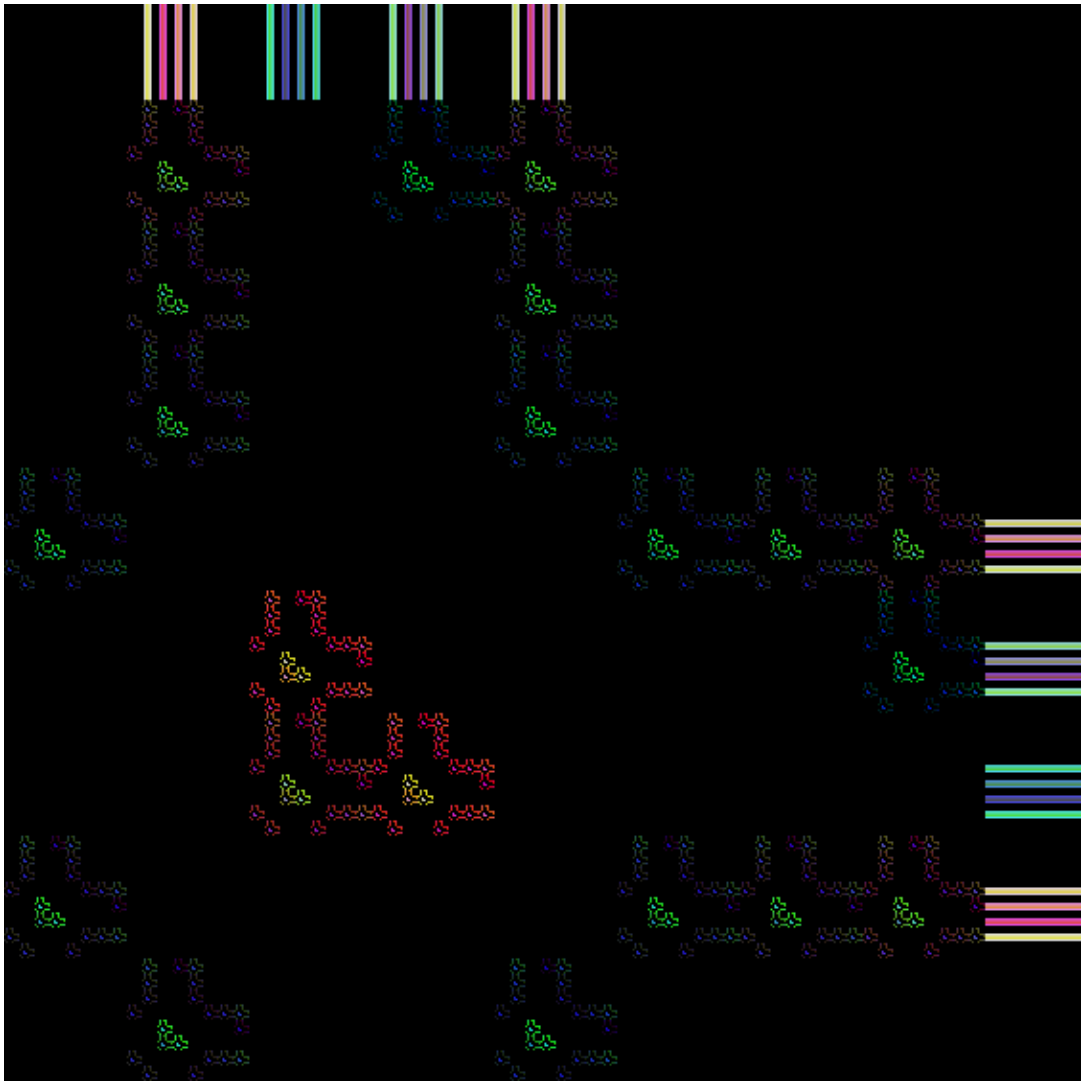
```
40   0.4791   0.5281   -0.8119   0.9869   0.1841   0.8489   -0.4026   0.6989
```



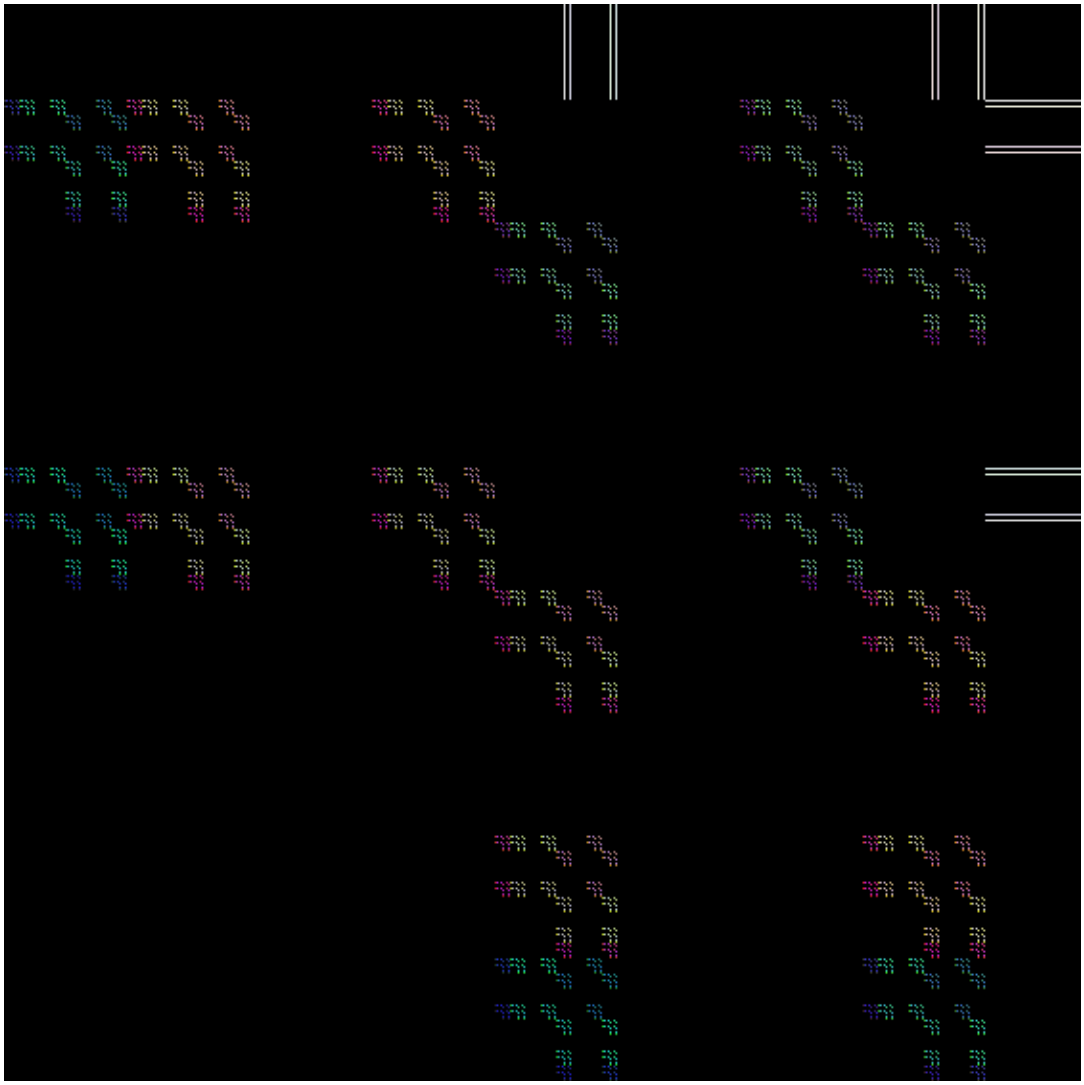
```
41   -0.4102   0.7110   -0.6809   -0.9612   0.3148   0.5291   -0.2623   0.5545
```



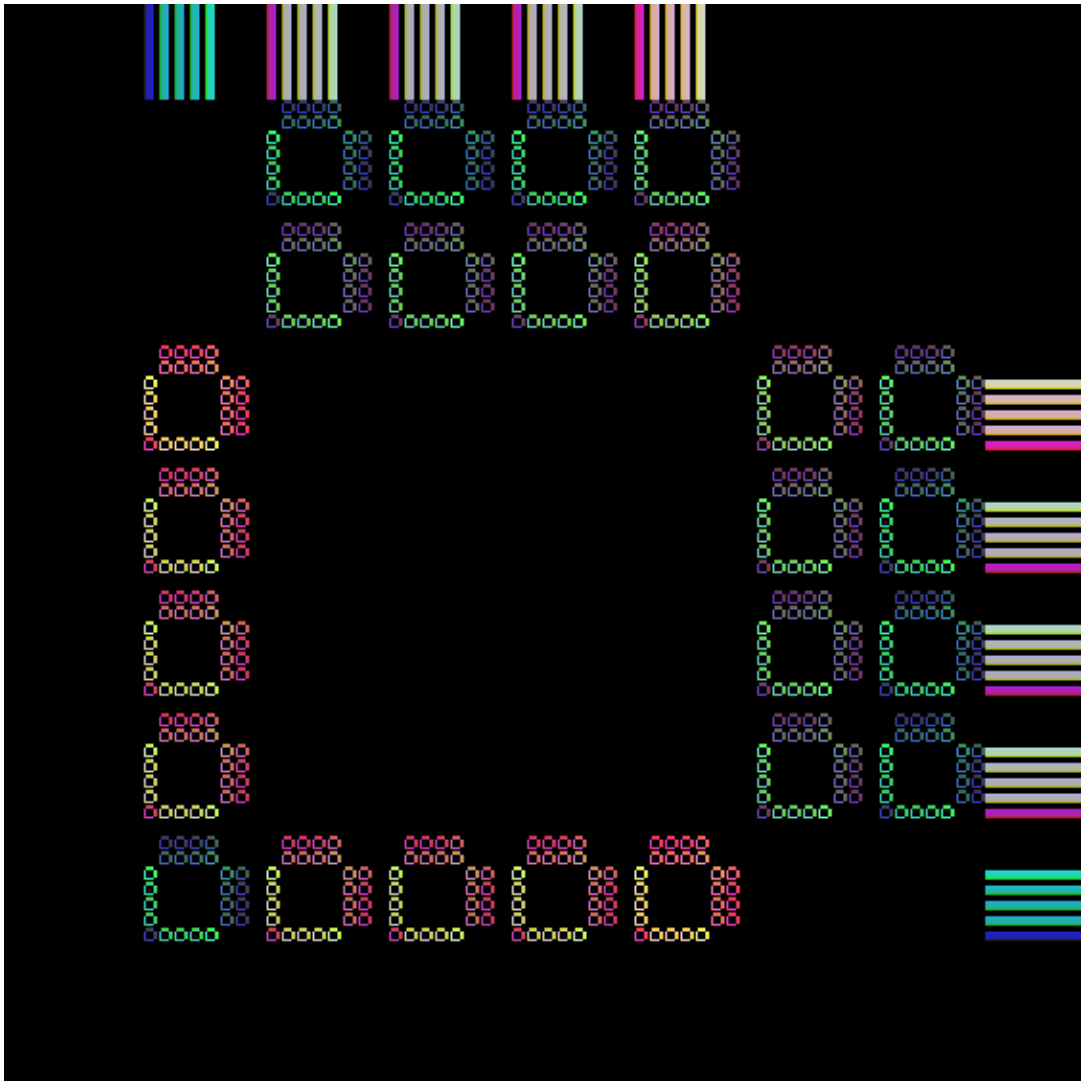
42 −0.6769 0.8488 0.2828 0.5527 0.7976 −0.7148 −0.6573 −0.5256



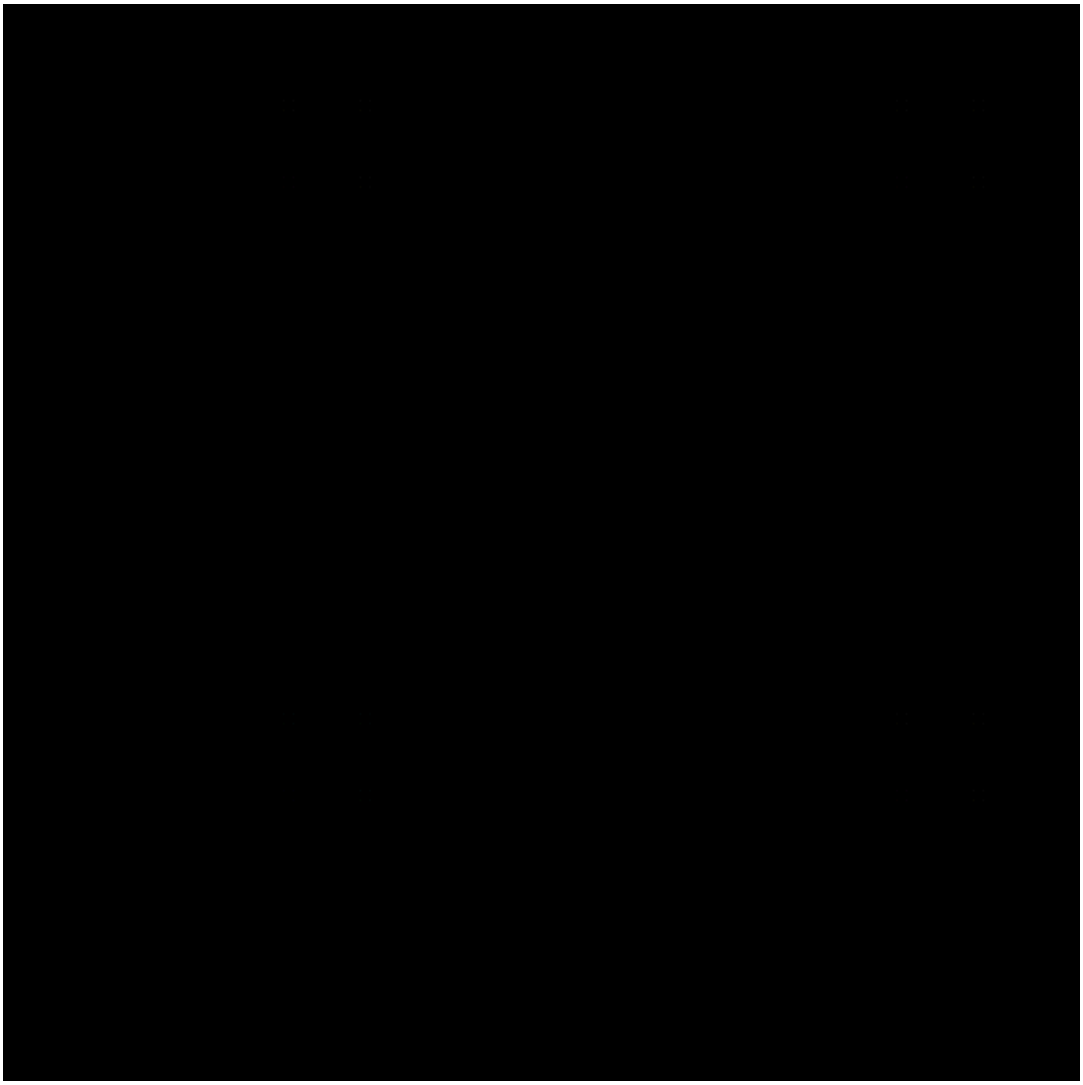
43 −0.6722 −0.1061 −0.9734 −0.1115 0.8142 −0.9413 −0.3714 0.9001



44 −0.9893 0.1355 0.6729 0.6583 0.6956 0.8200 −0.2465 −0.4344



45 −0.2849 −0.6468 0.01141 −0.6692 −0.8805 −0.5924 −0.2739 0.02347



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46   0.8090   -0.4346   0.7990   -0.8402   0.5717   0.04364   0.1564   0.5896
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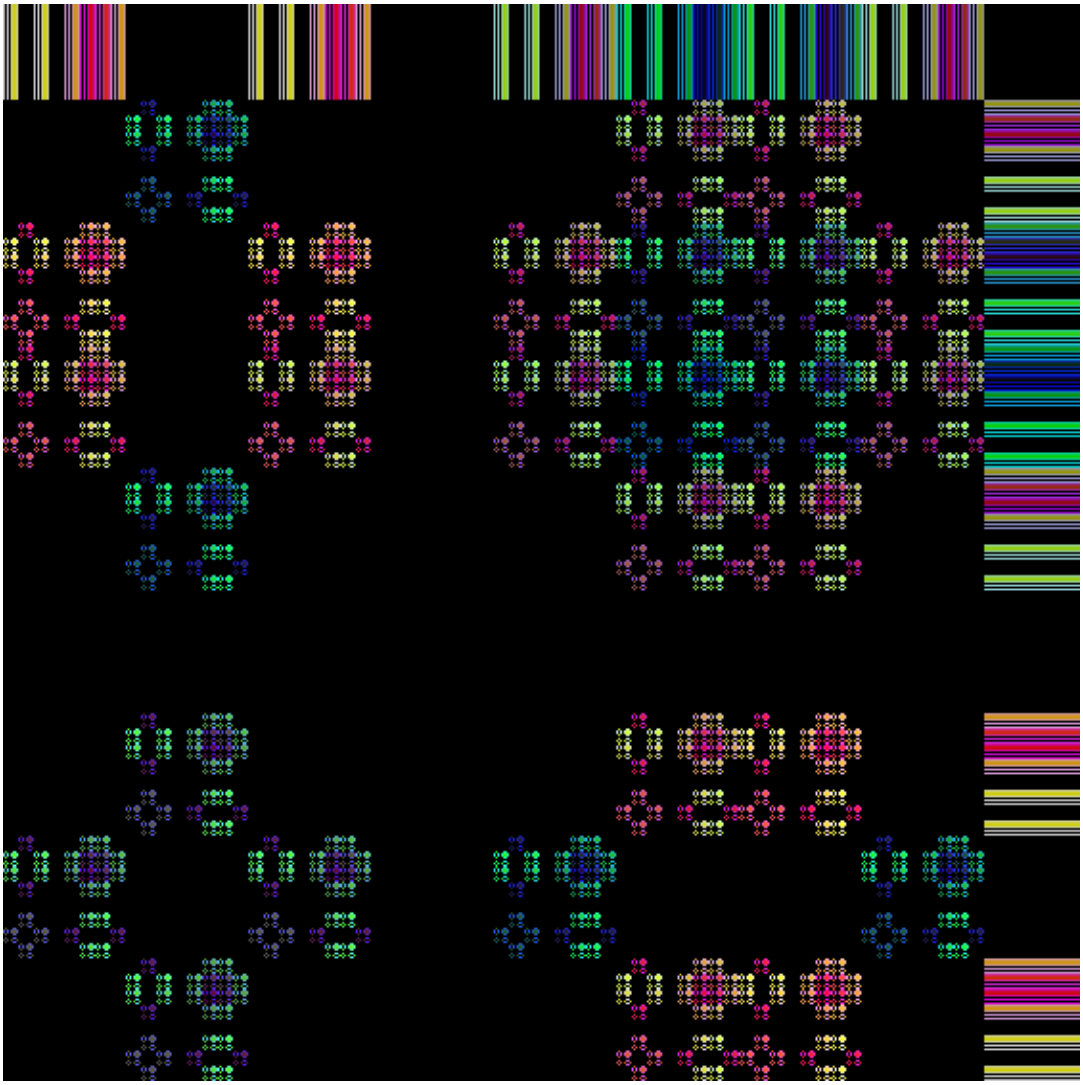
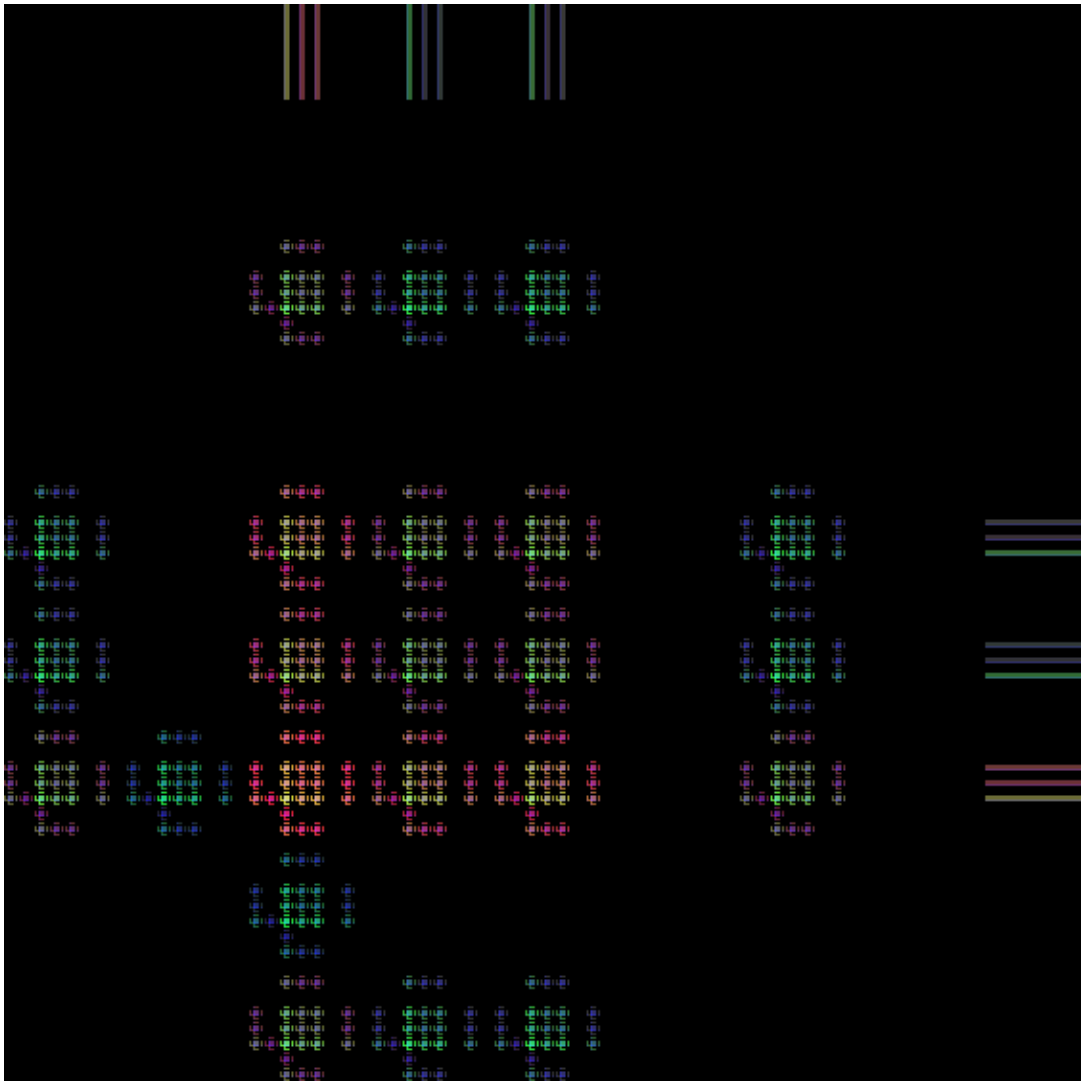
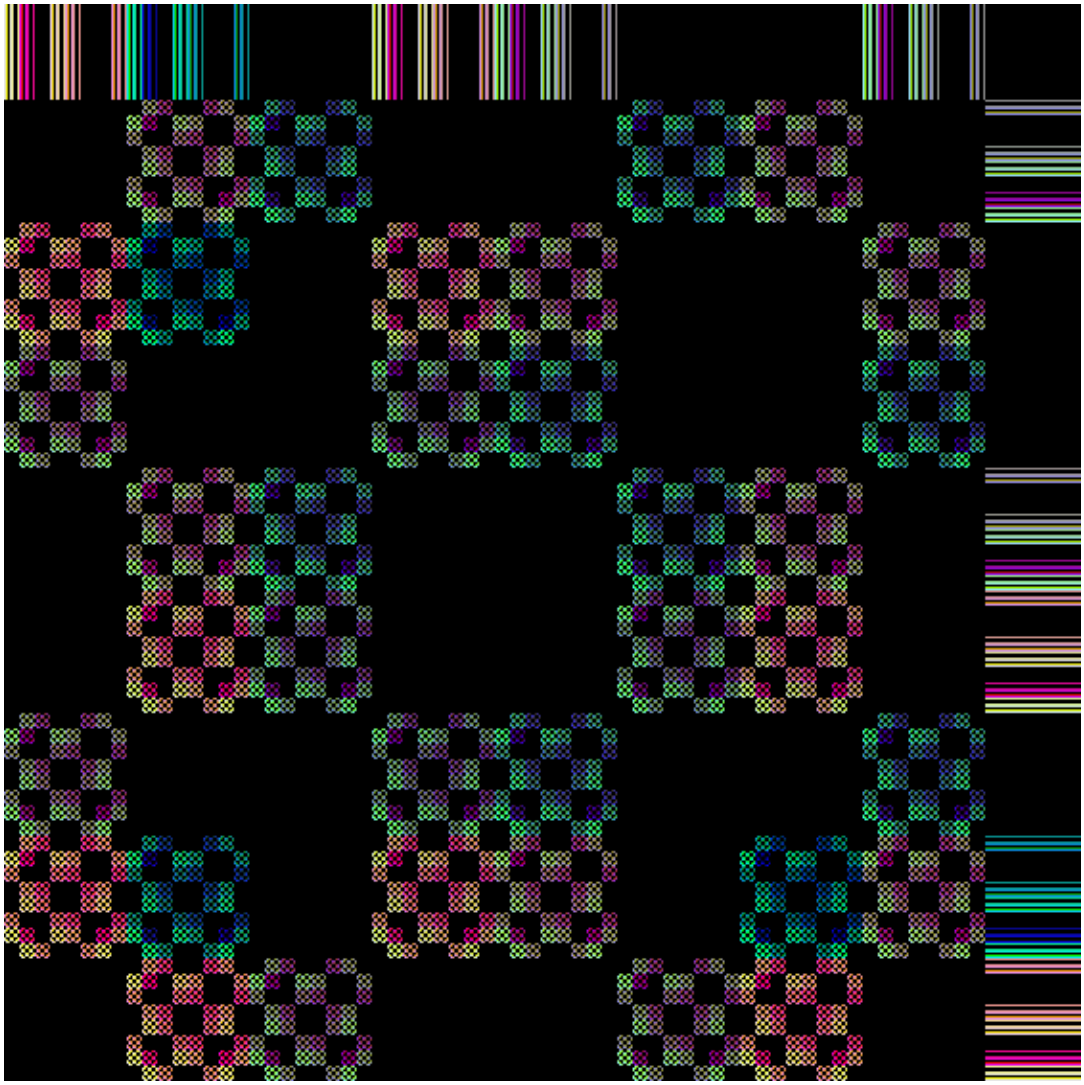


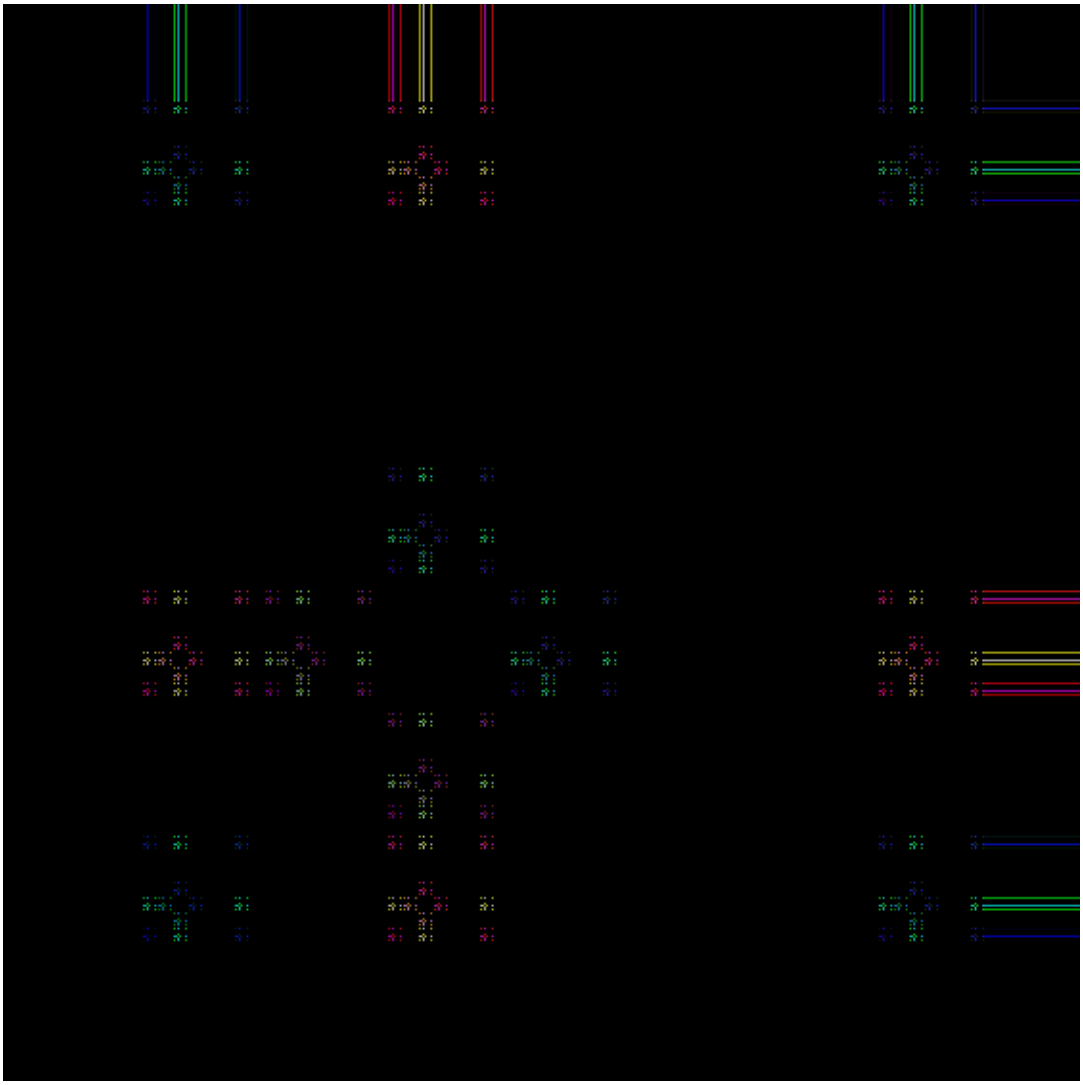
47 −0.009552 −0.2617 0.4131 0.2004 0.2188 −0.4435 −0.008179 −0.8678



48 0.8953 0.03824 −0.3602 0.7898 0.5863 −0.3617 −0.01773 0.5565



49 −0.8485 0.02908 −0.1855 0.6517 −0.5154 −0.7211 −0.9854 0.07846



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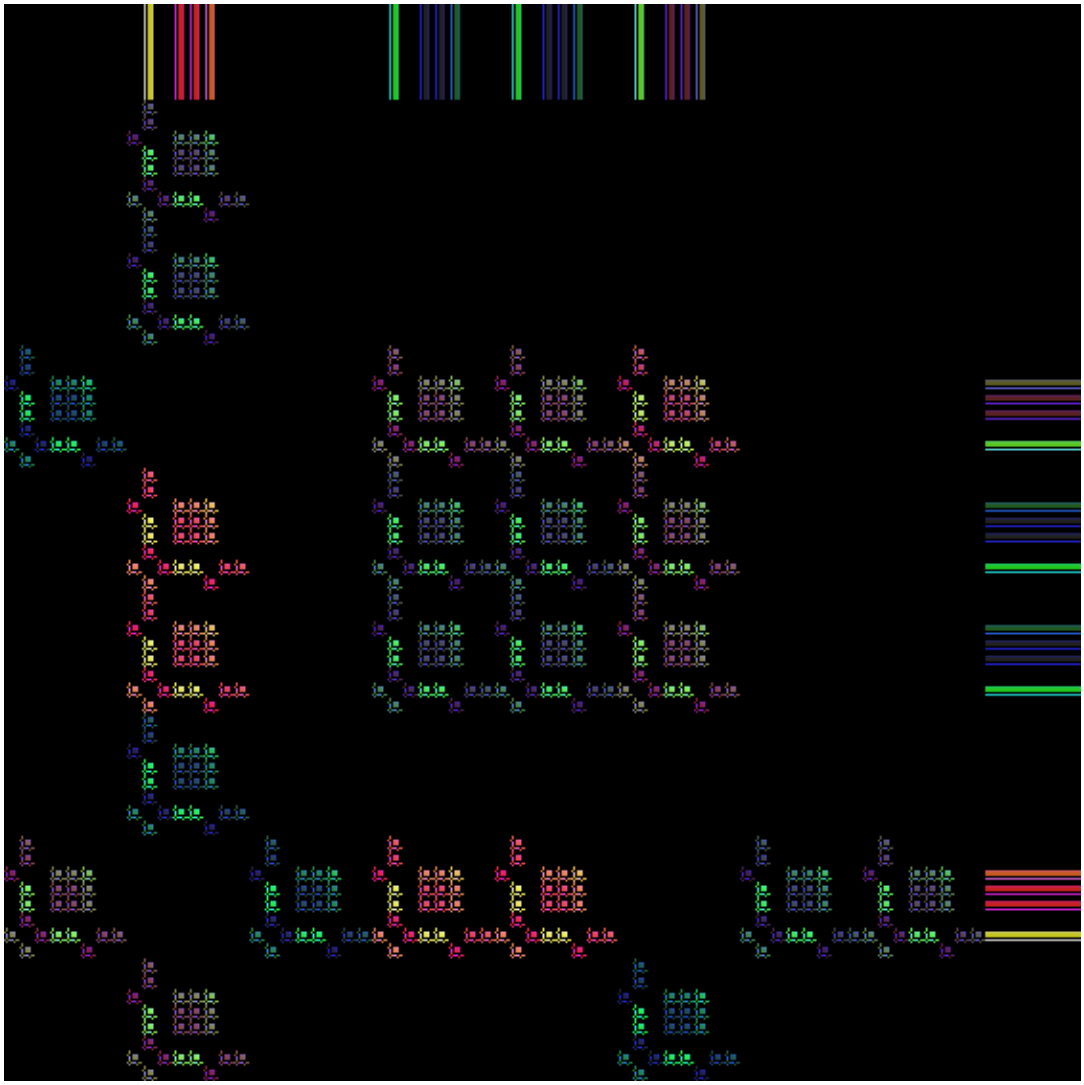
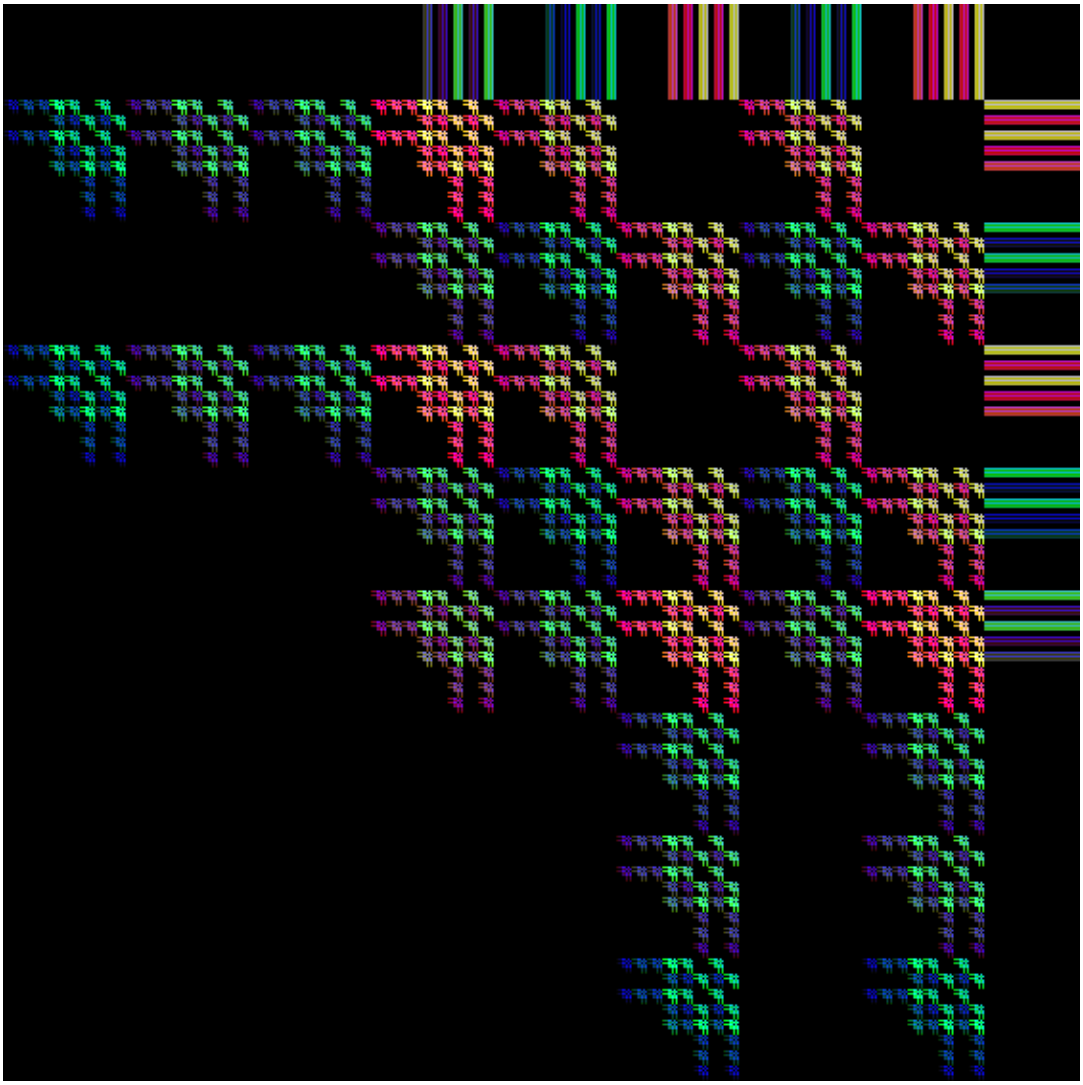
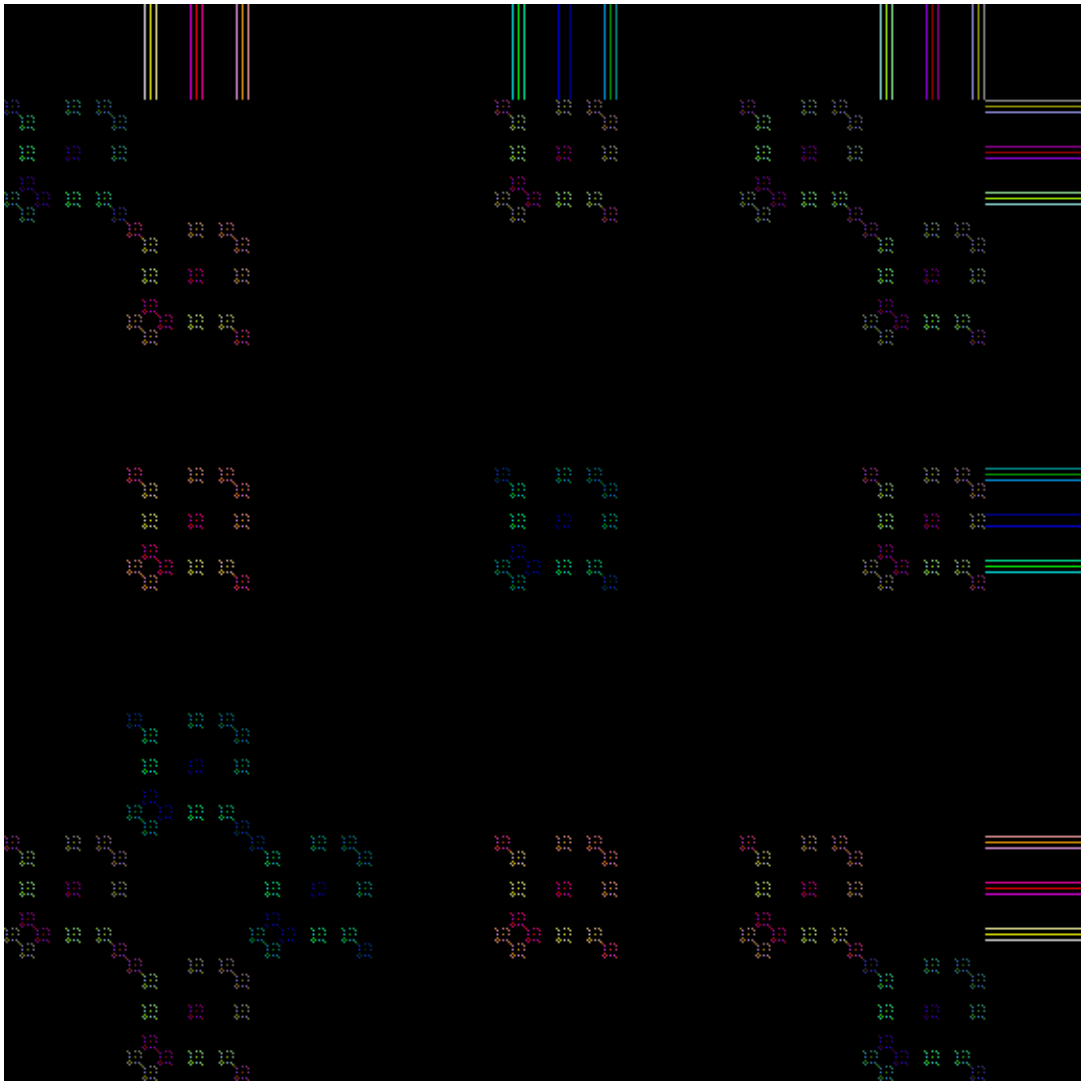


51 −0.6782 −0.4605 −0.5090 0.2404 0.05807 0.7141 0.08212 0.7309



52 −0.3154 0.8195 −0.7671 −0.8676 0.01117 −0.9541 −0.1176 0.5325



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53   -0.8241   0.5789   0.5455   -0.2864   0.6508   -0.5401   -0.2556   -0.8943
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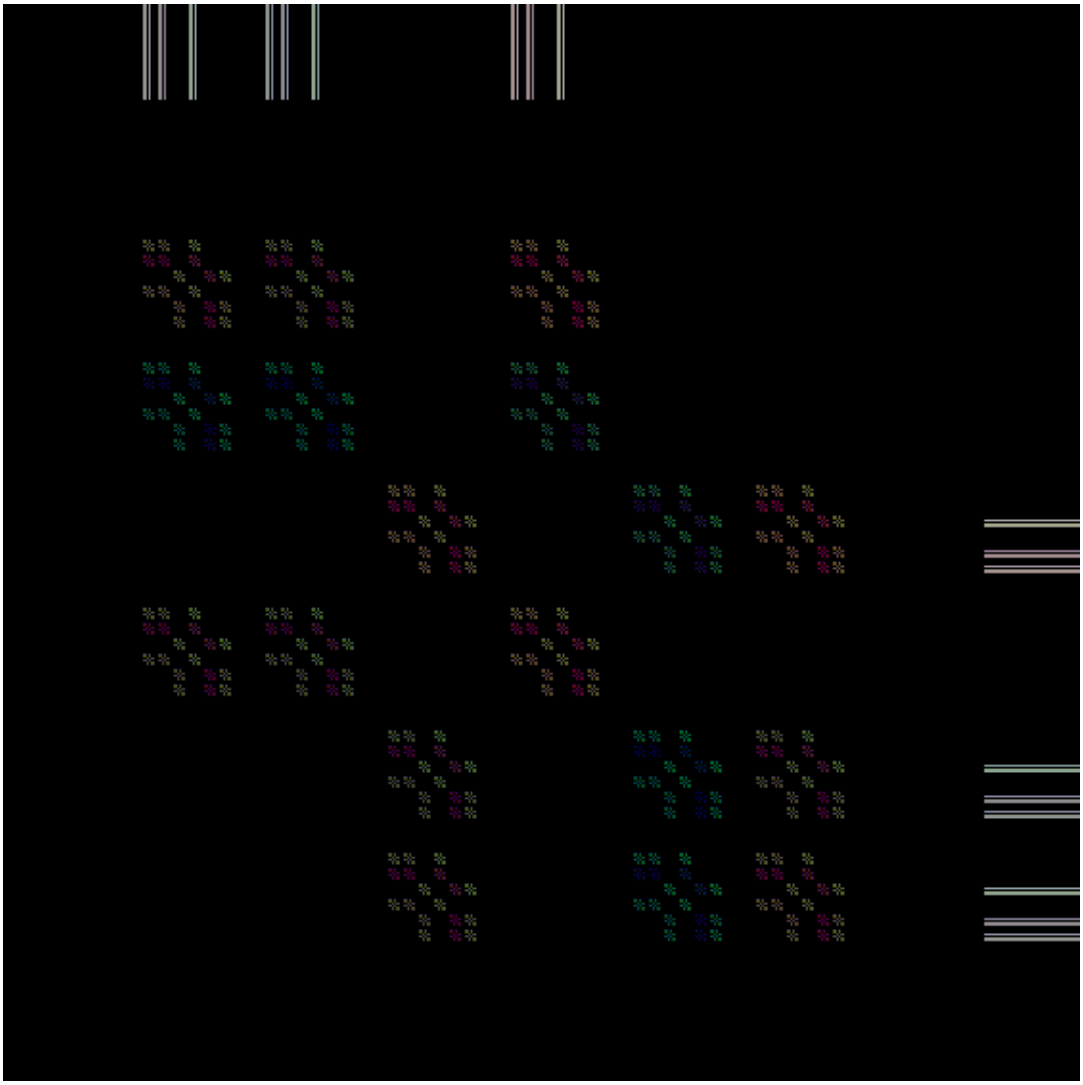
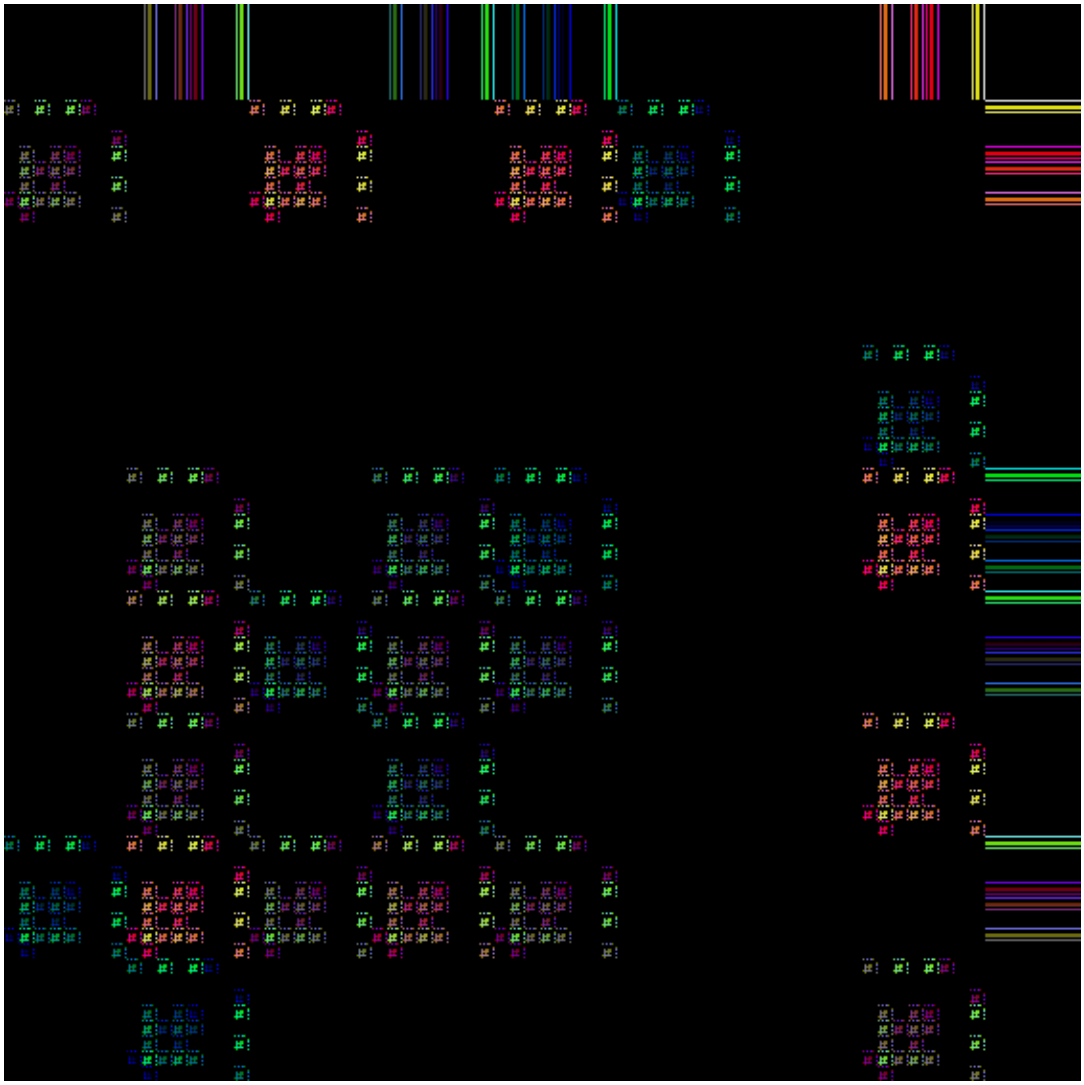
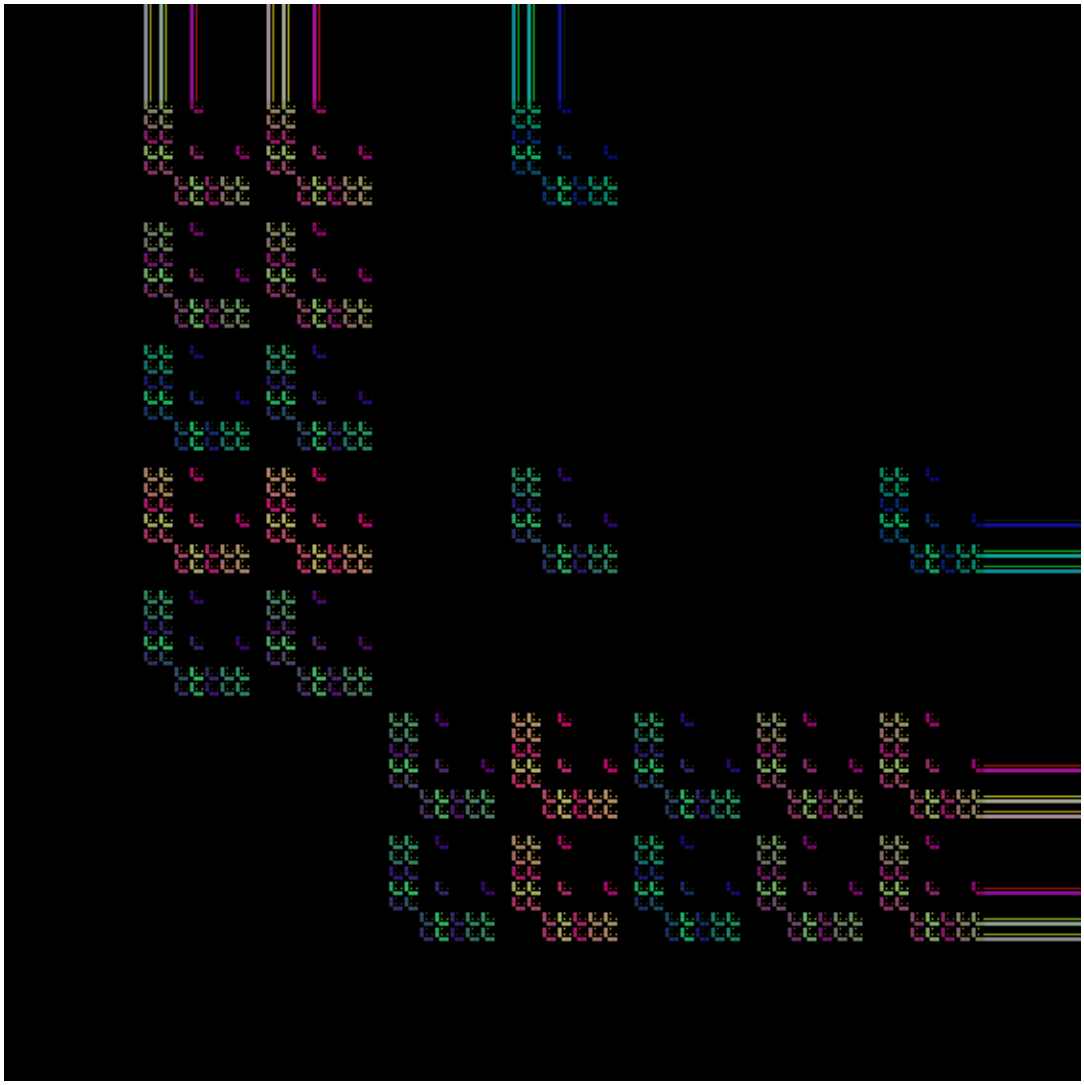


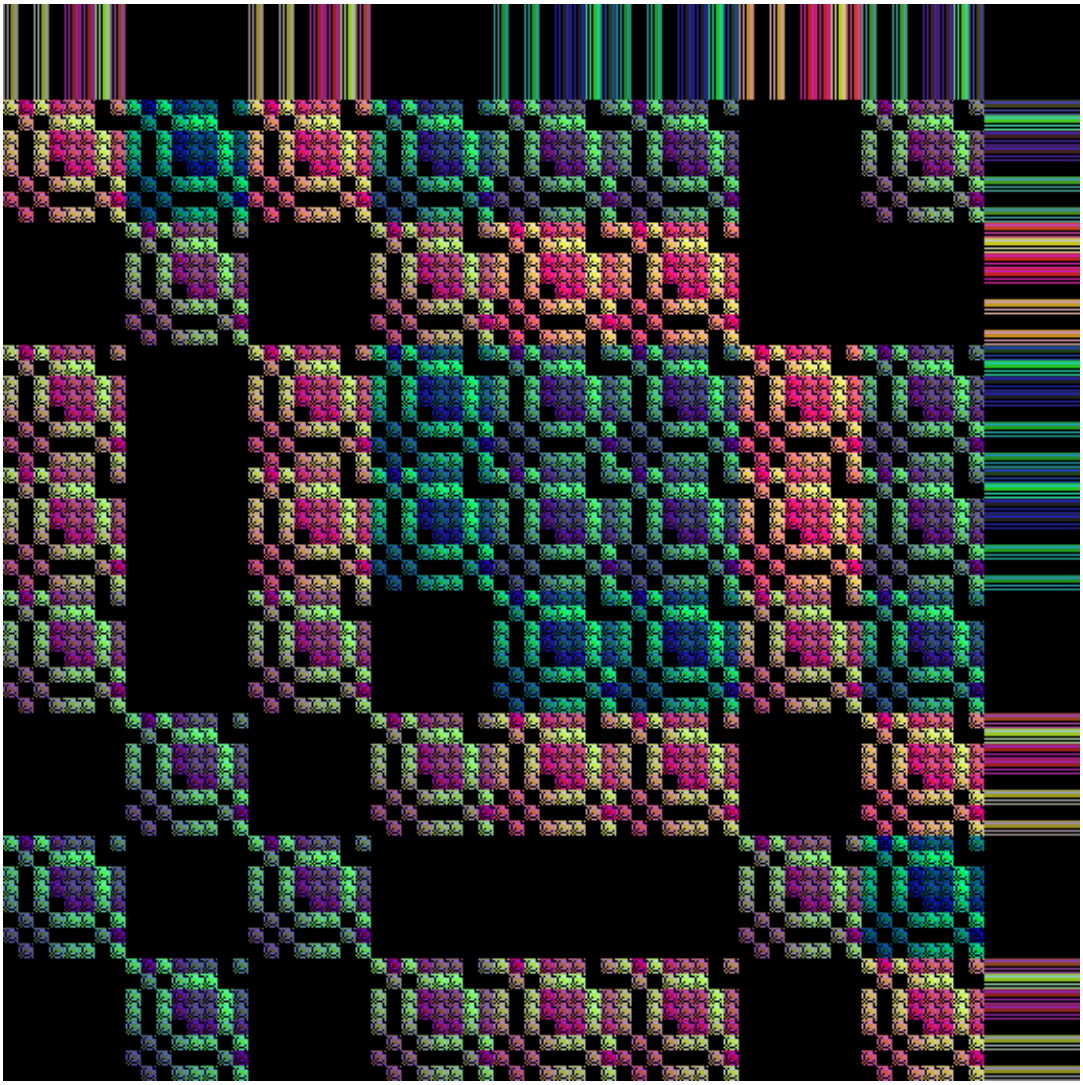
54 −0.4254 0.4197 −0.04053 0.1841 0.009247 −0.8128 −0.9436 0.8673



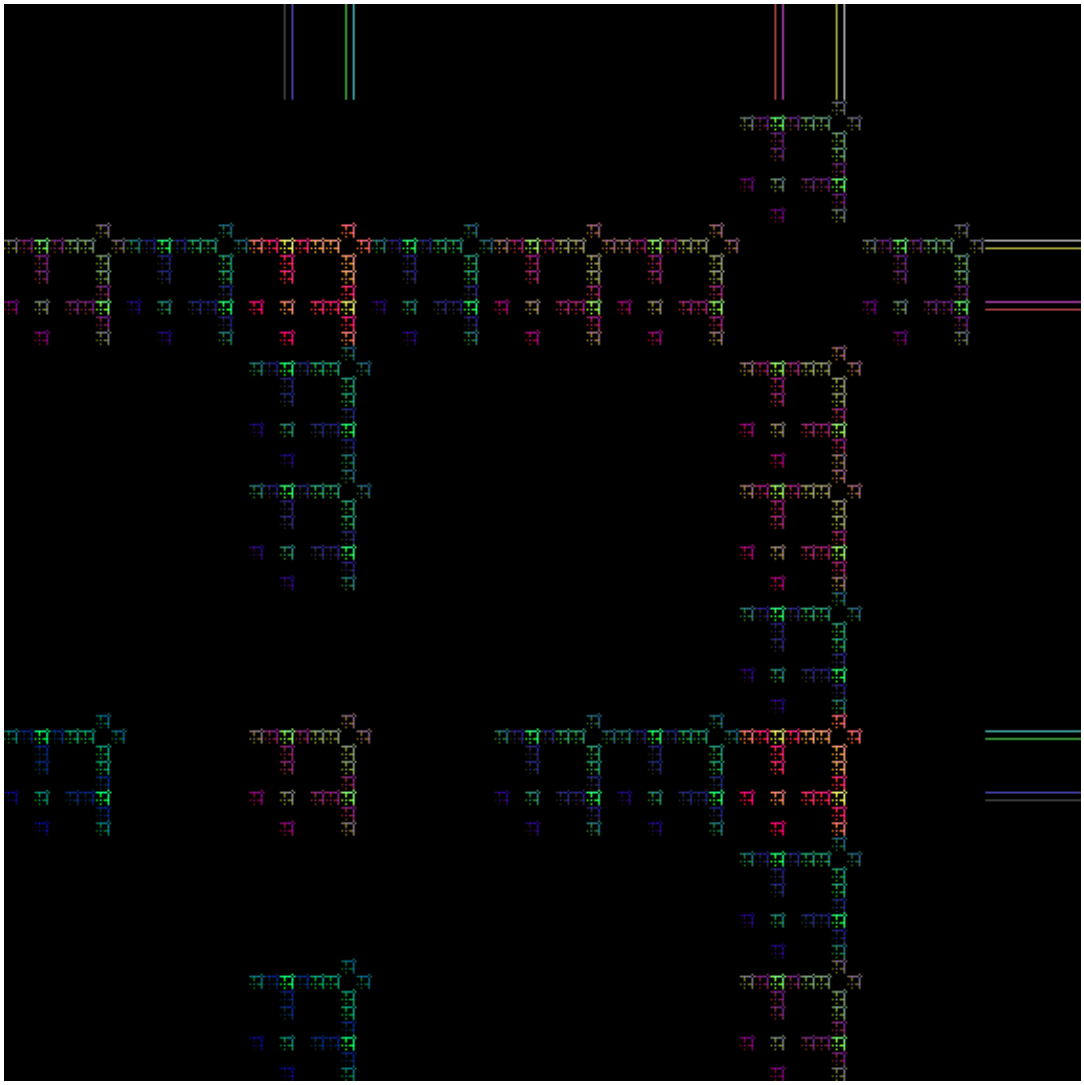
55 −0.9503 0.5588 0.6323 −0.3436 0.08084 −0.4638 −0.1323 −0.03955



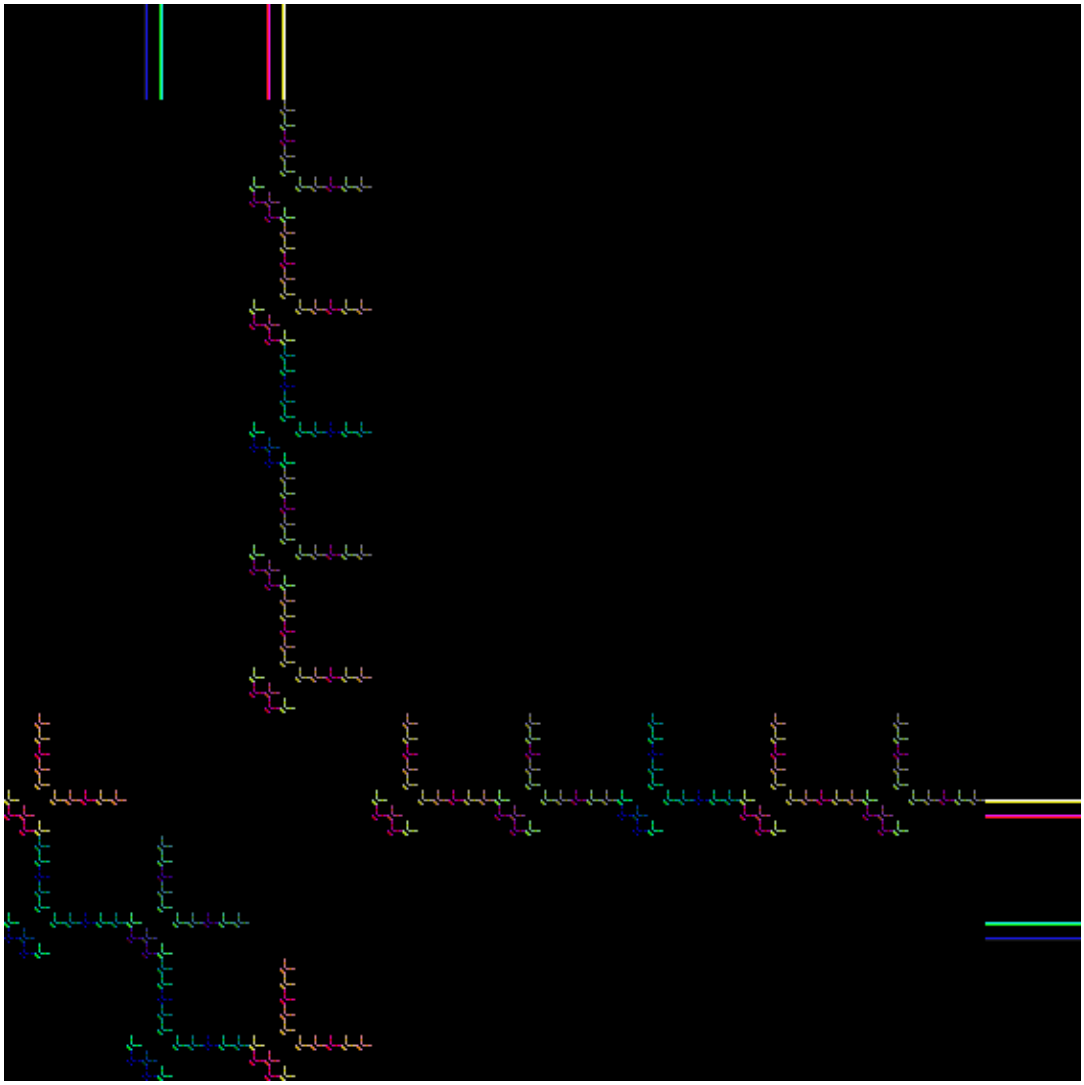
56 0.5464 −0.2215 0.6145 −0.03860 0.1410 0.1468 0.7748 0.2568



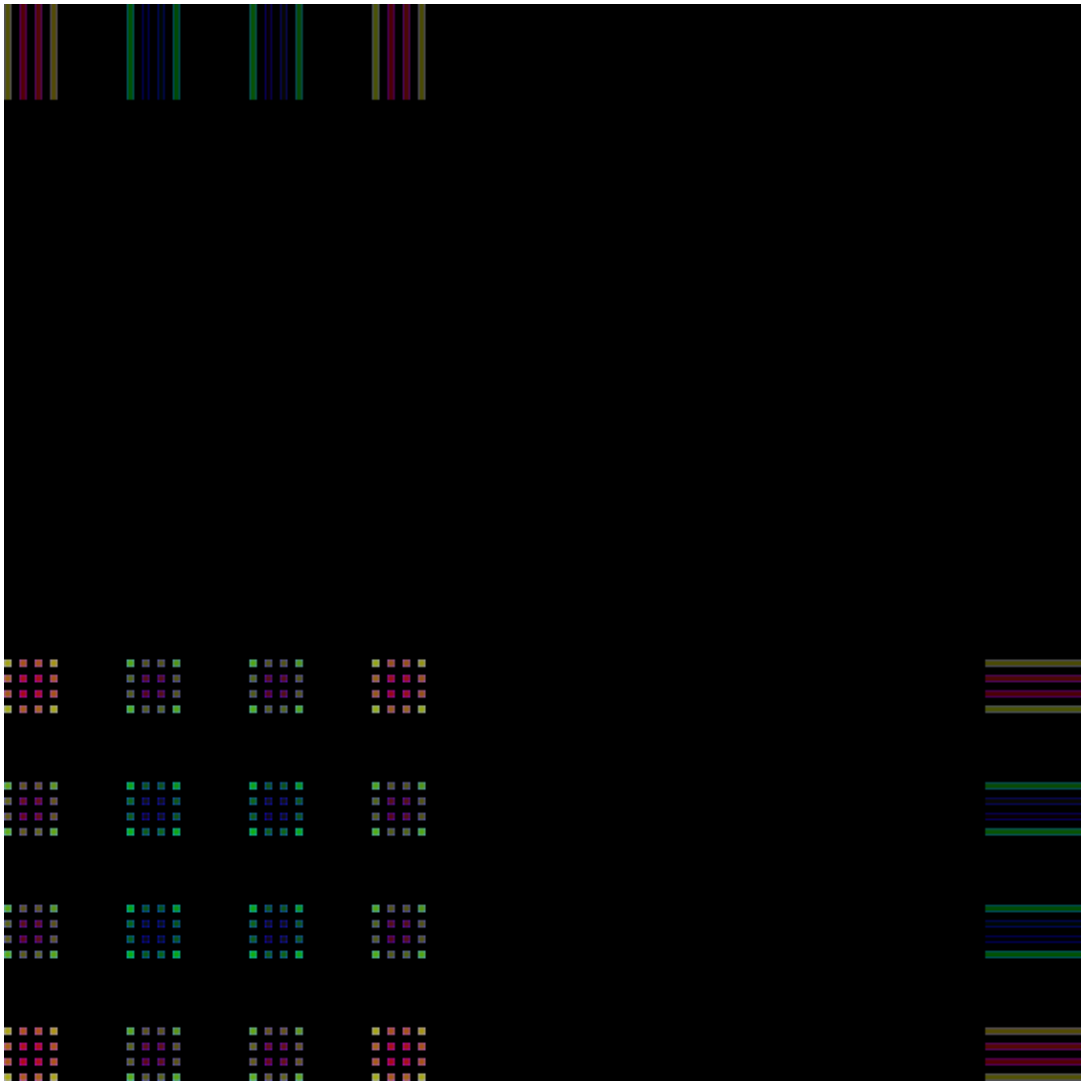
57 −0.2251 −0.5320 0.2589 −0.4937 −0.07224 −0.1064 0.6743 −0.2899



58 −0.09616 0.1238 0.9335 −0.2623 −0.4445 −0.9315 −0.2633 −0.4493



59 0.3393 0.02927 0.03638 0.2953 −0.4342 −0.5080 −0.6047 −0.9806



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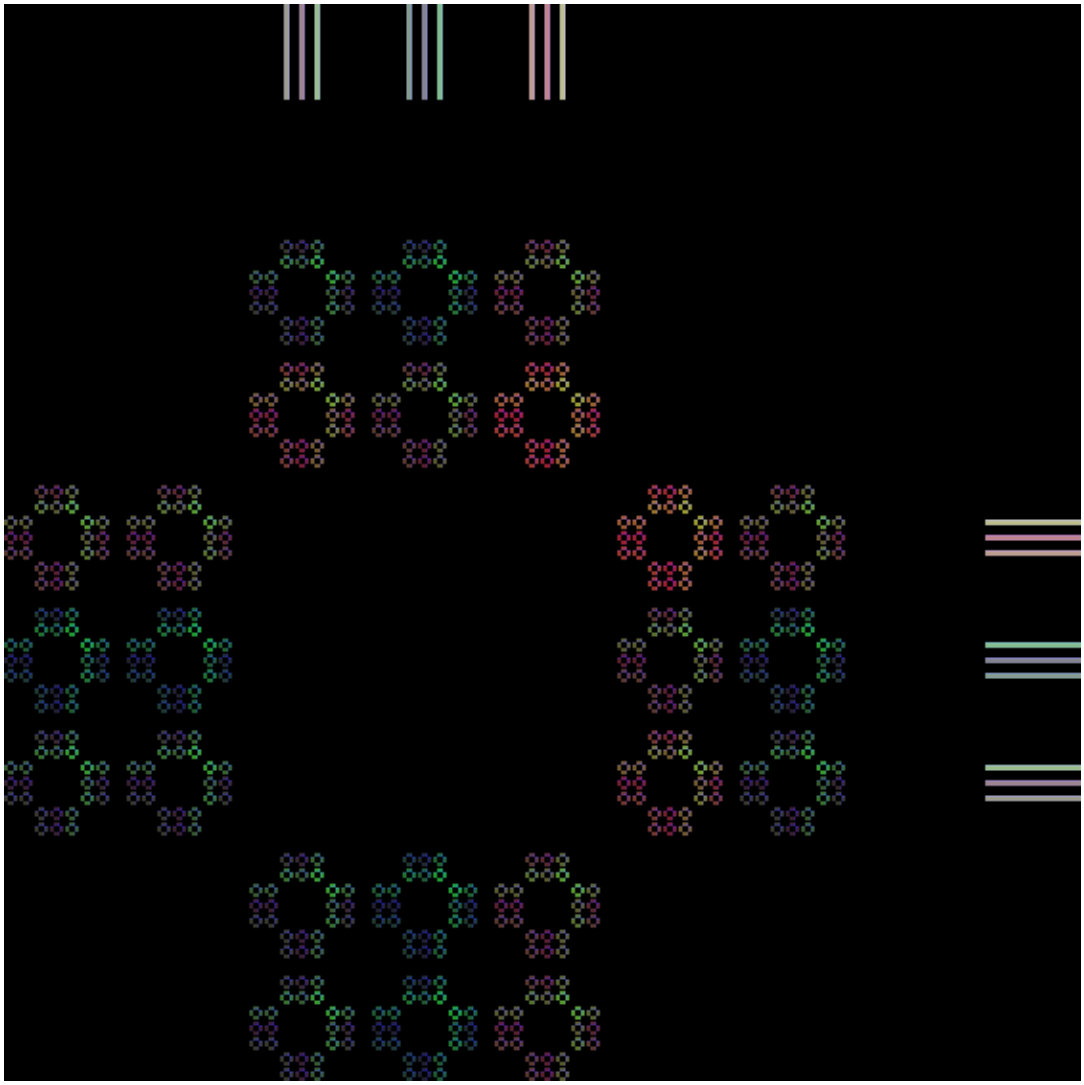
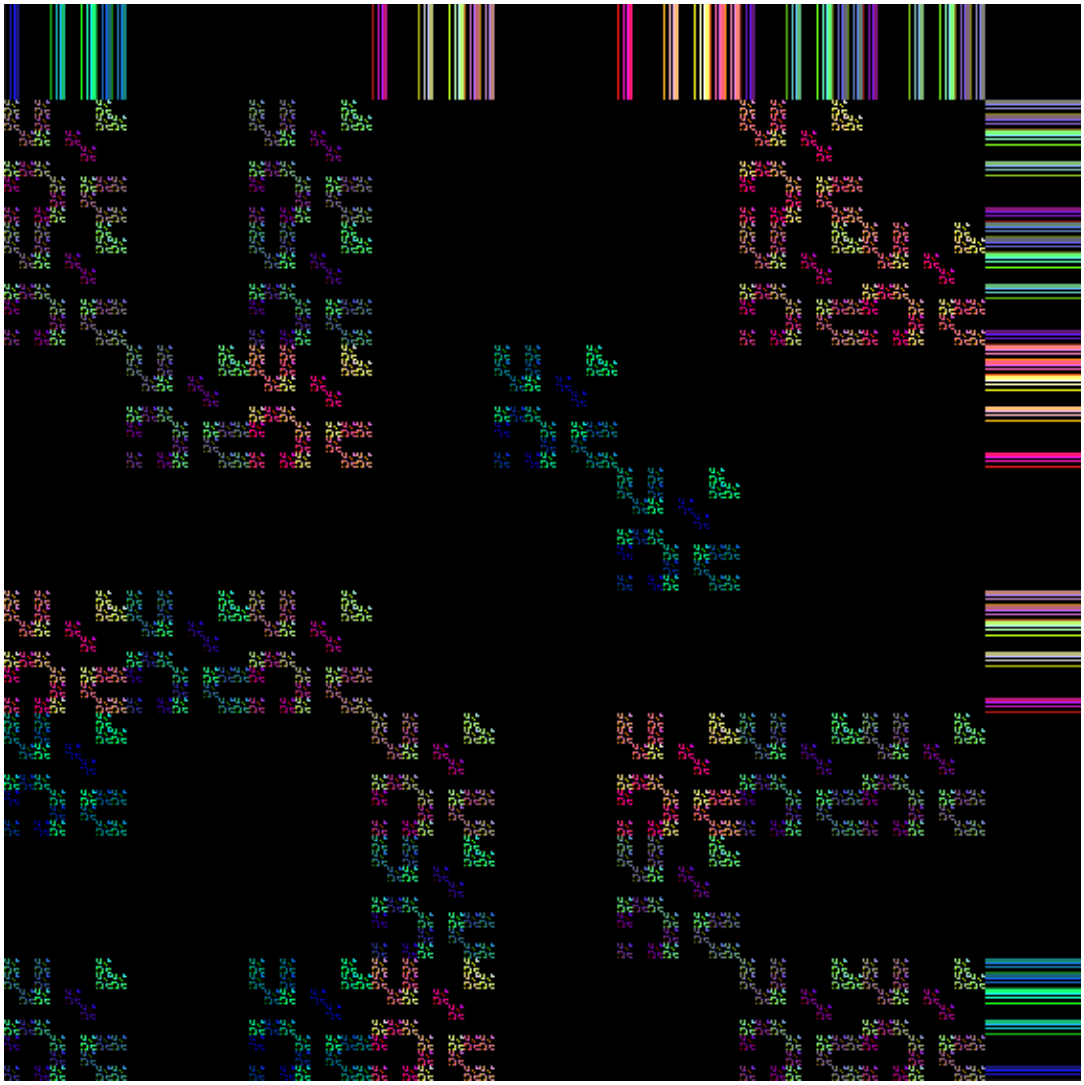


61 0.09485 −0.5662 −0.08505 0.7346 −0.9118 0.9711 0.3828 0.5239



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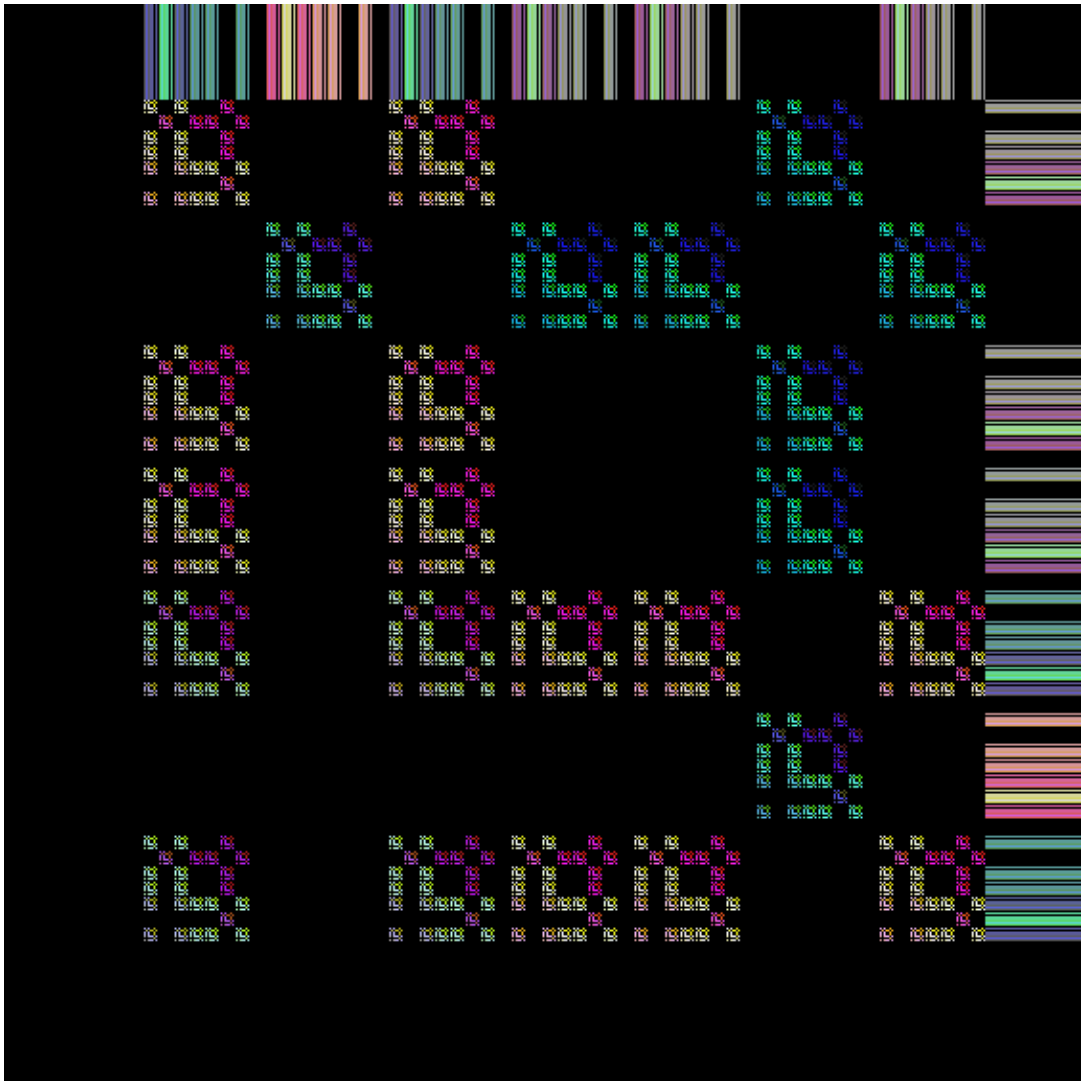
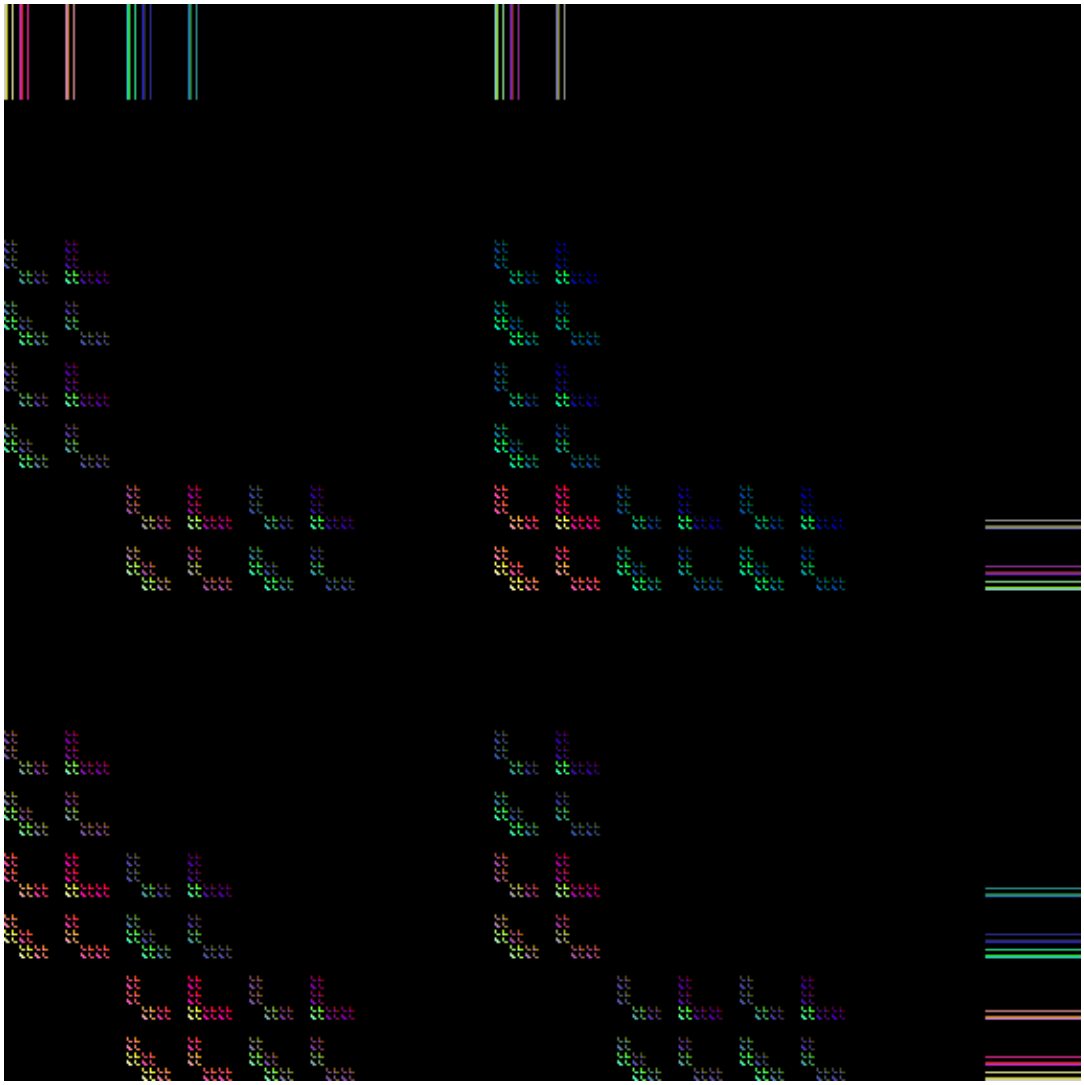
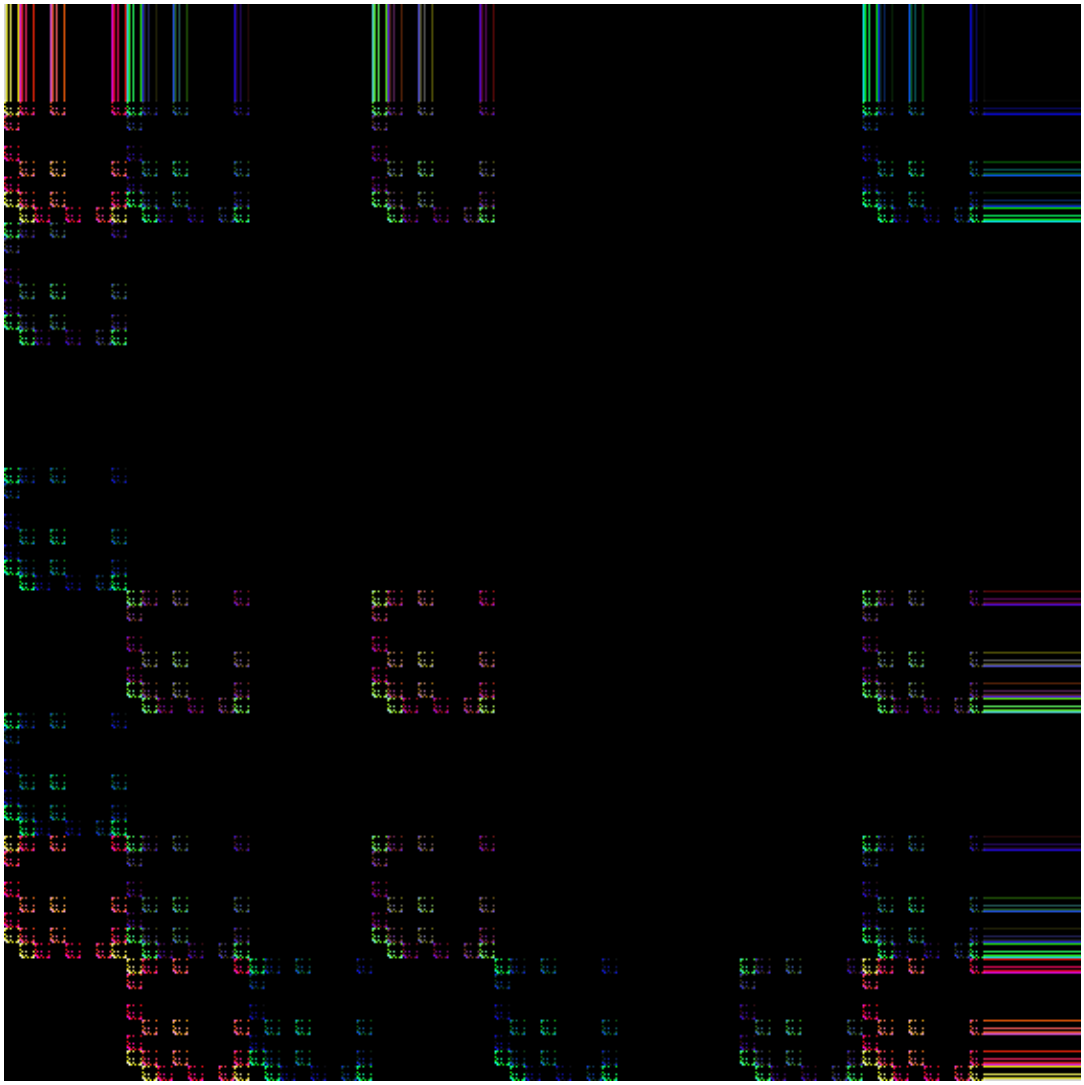


63 0.7922 0.1610 −0.2777 −0.9351 0.5000 −0.4360 −0.5075 −0.9974



64 0.8270 0.1335 −0.7609 0.3208 −0.7370 −0.8940 −0.5837 0.05347



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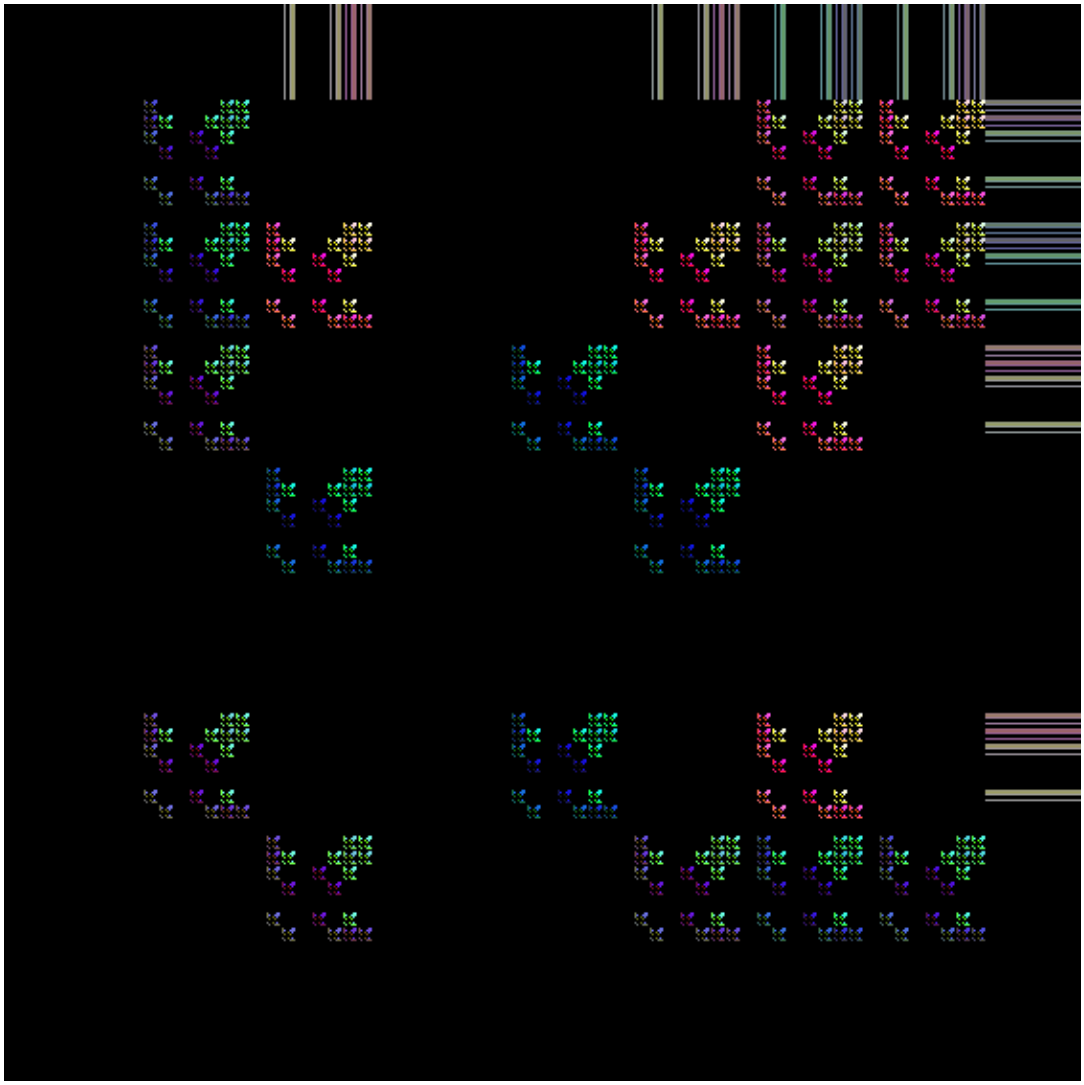
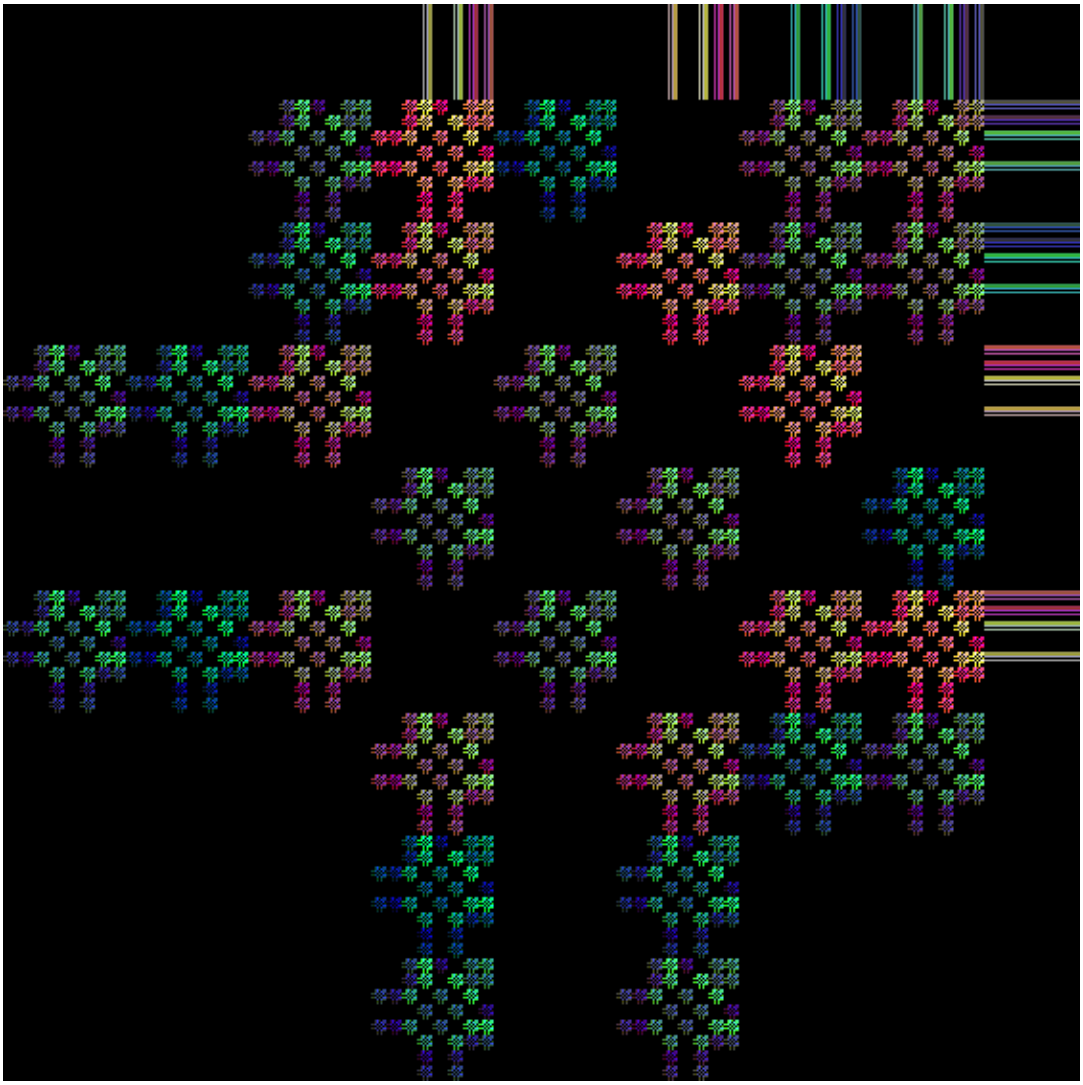
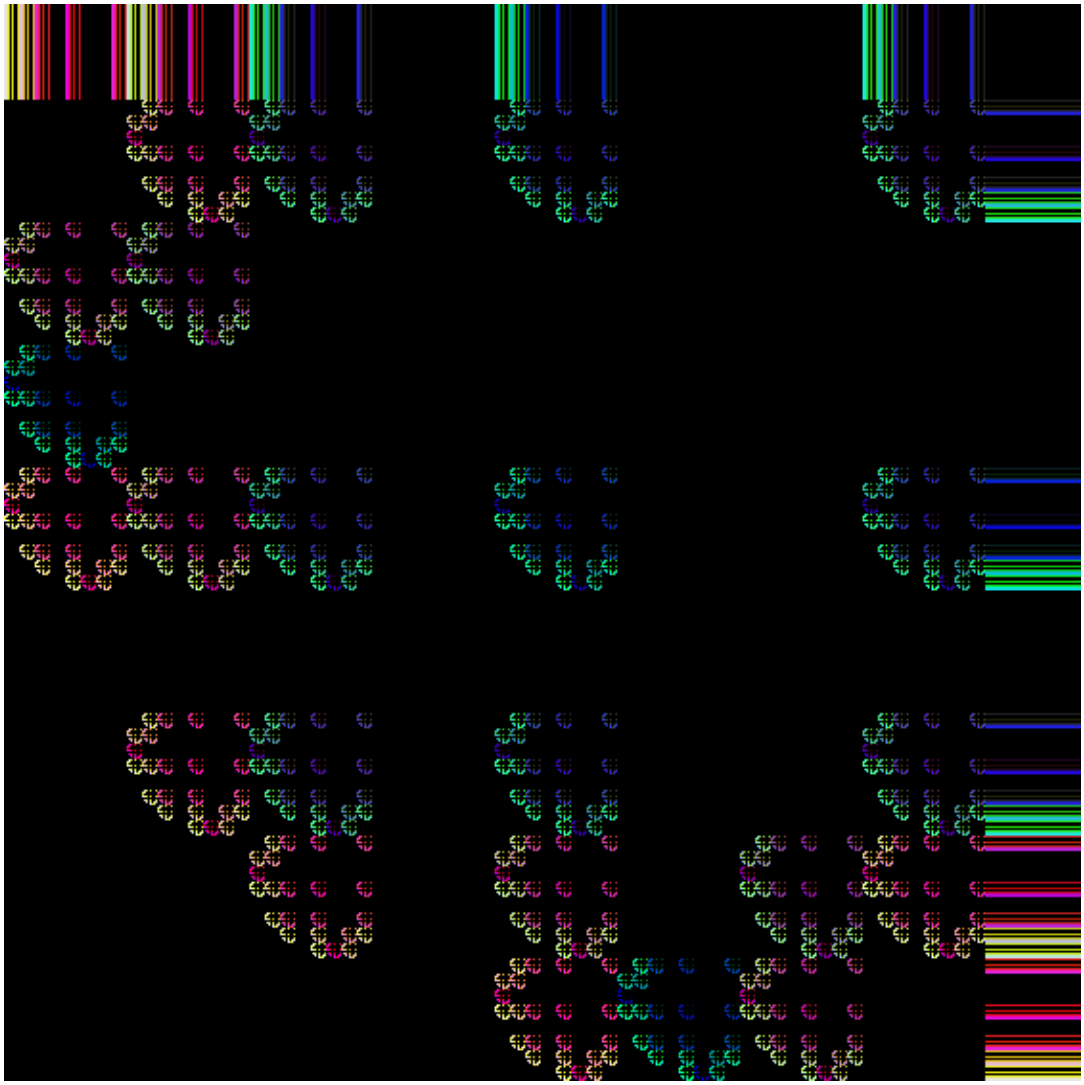


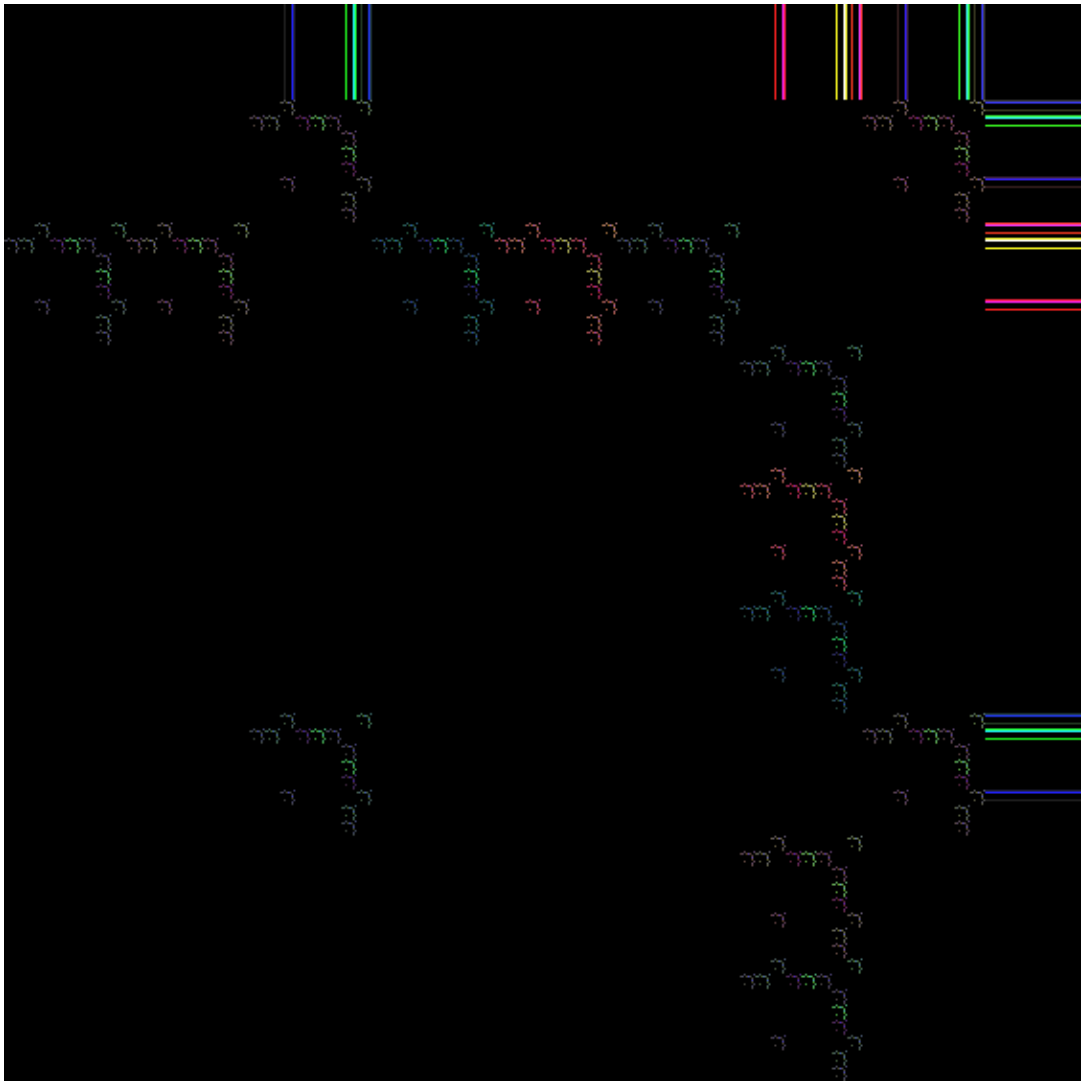
66 −0.4186 −0.5758 −0.02335 0.6149 −0.2671 0.7105 0.1899 0.3376



67 0.9028 0.7256 0.1523 −0.9724 0.04092 −0.9239 −0.1830 0.1358



68 −0.6539 −0.5627 0.1401 −0.7880 −0.3106 −0.6805 0.9468 0.2314



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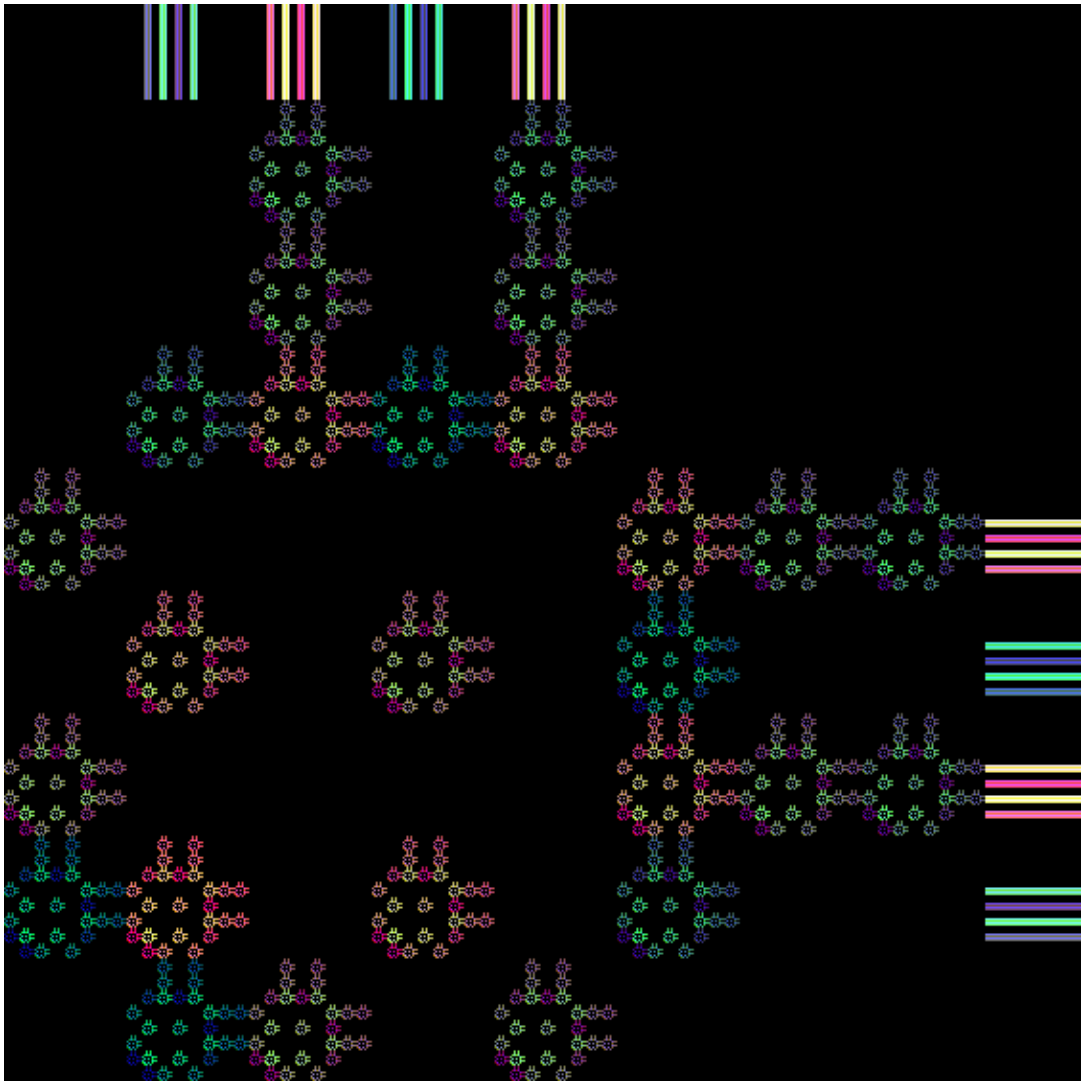
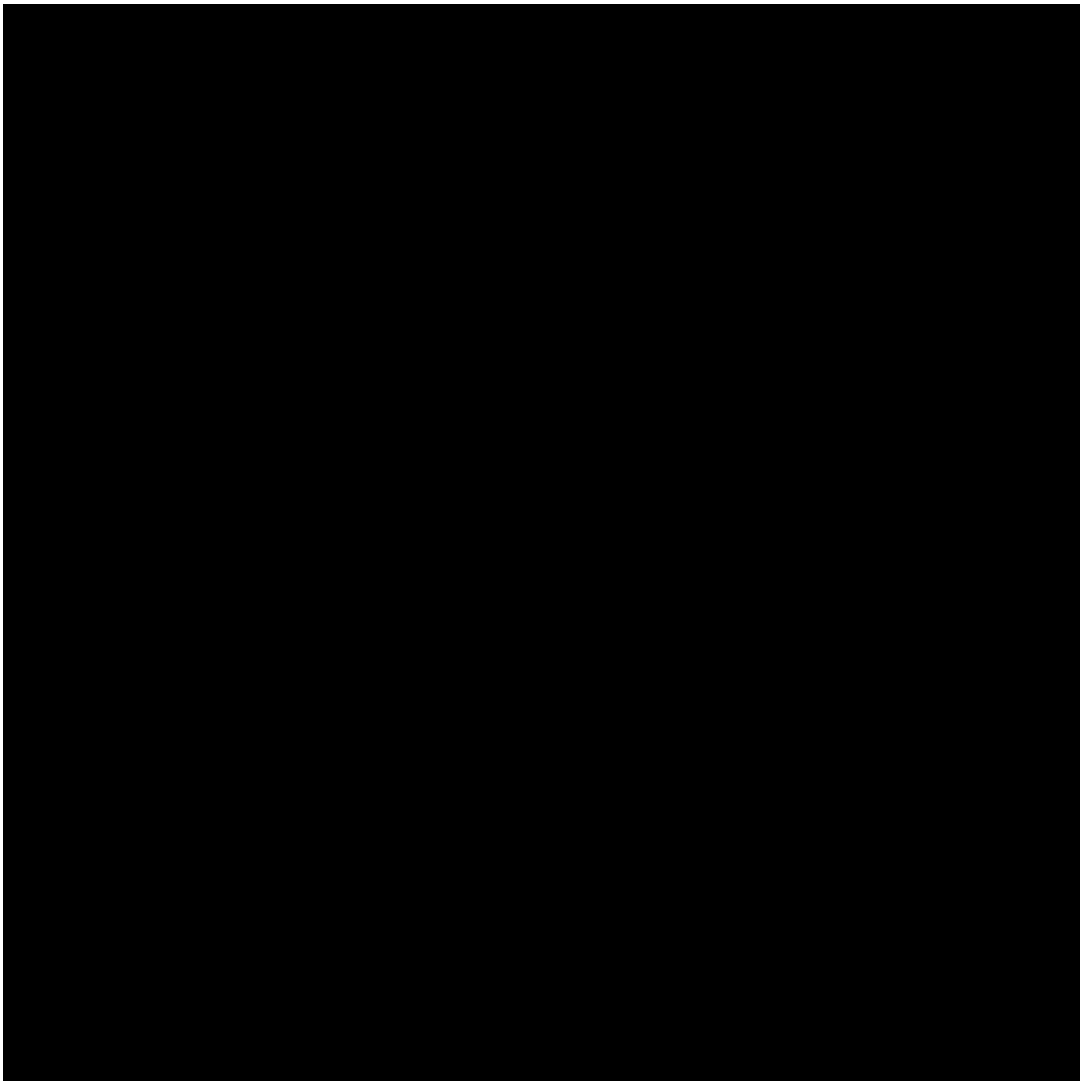
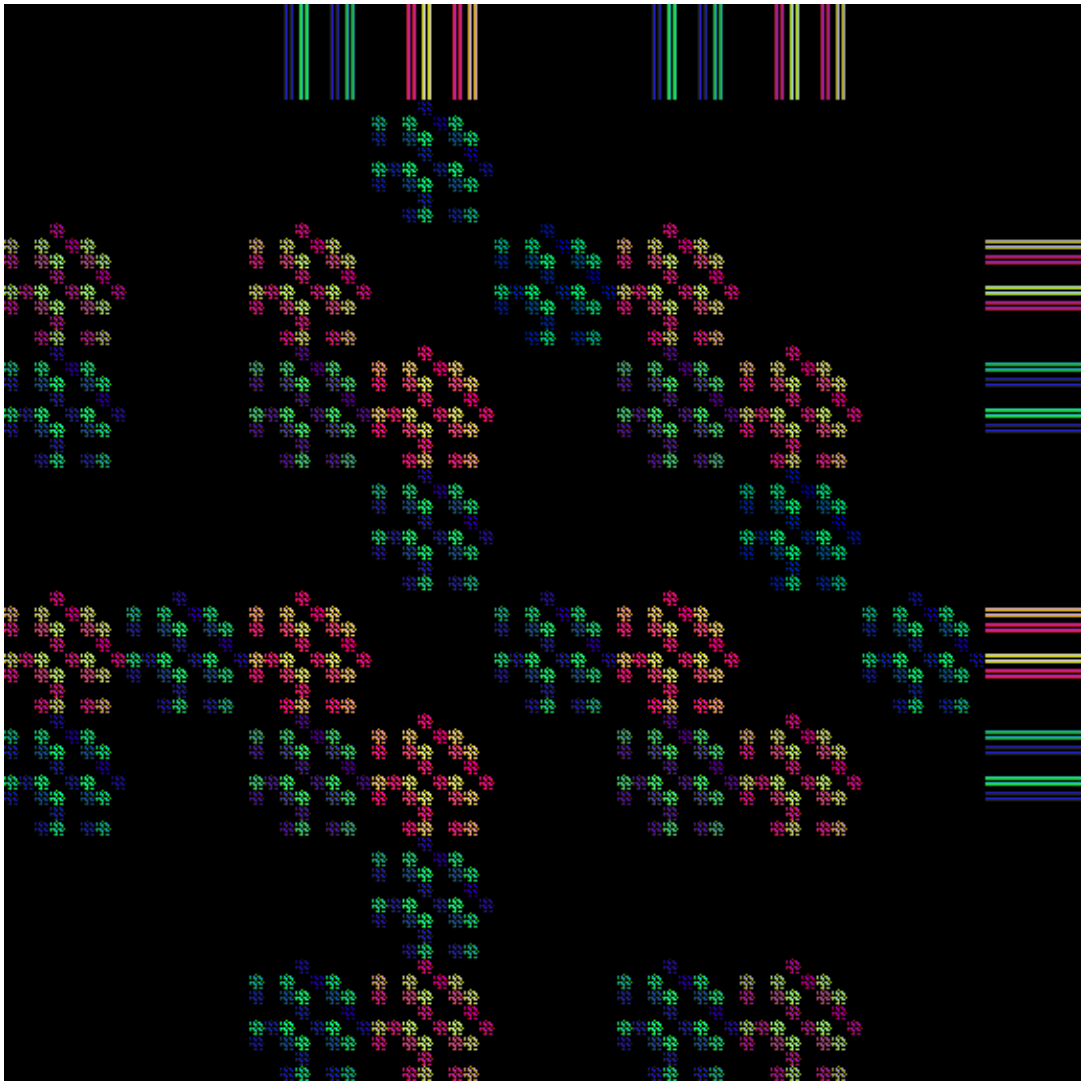


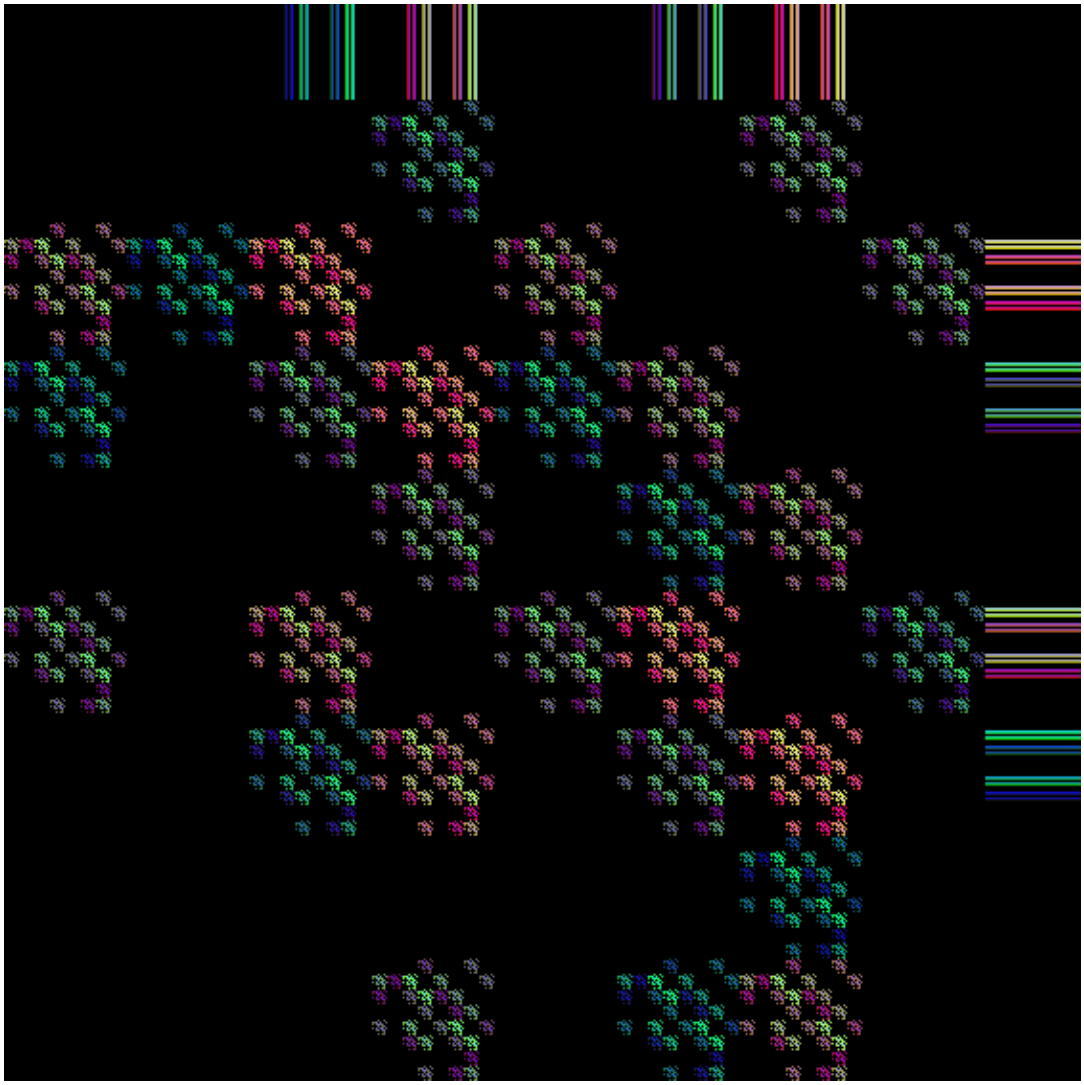
70 −0.9991 −0.2752 −0.1037 −0.3305 −0.1890 −0.8344 −0.5357 −0.1026



71 −0.01523 −0.6563 0.1289 0.7818 −0.6263 0.1544 0.6293 −0.6987



72 −0.1789 −0.7087 0.09354 0.6070 −0.1636 0.2896 0.7818 −0.3559



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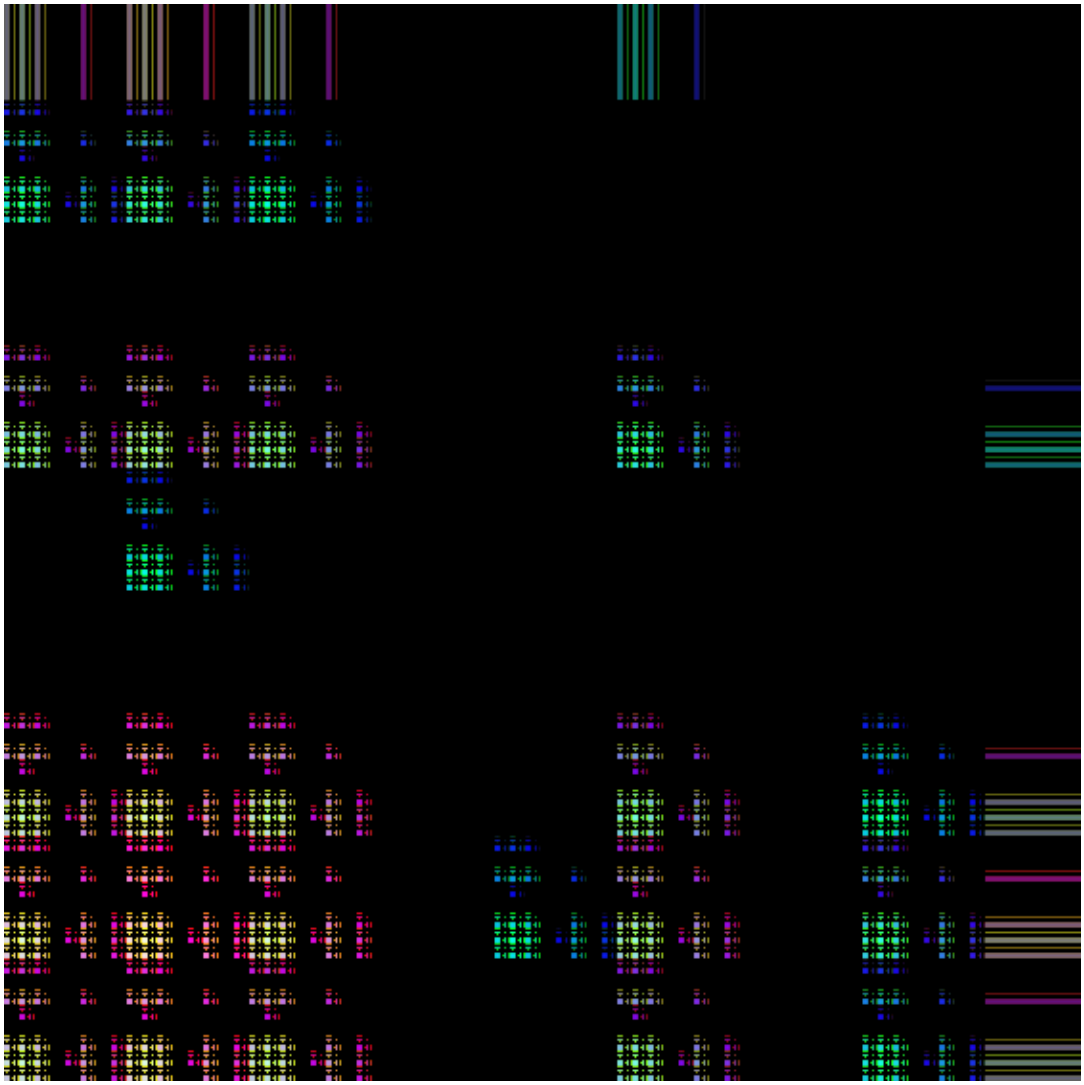
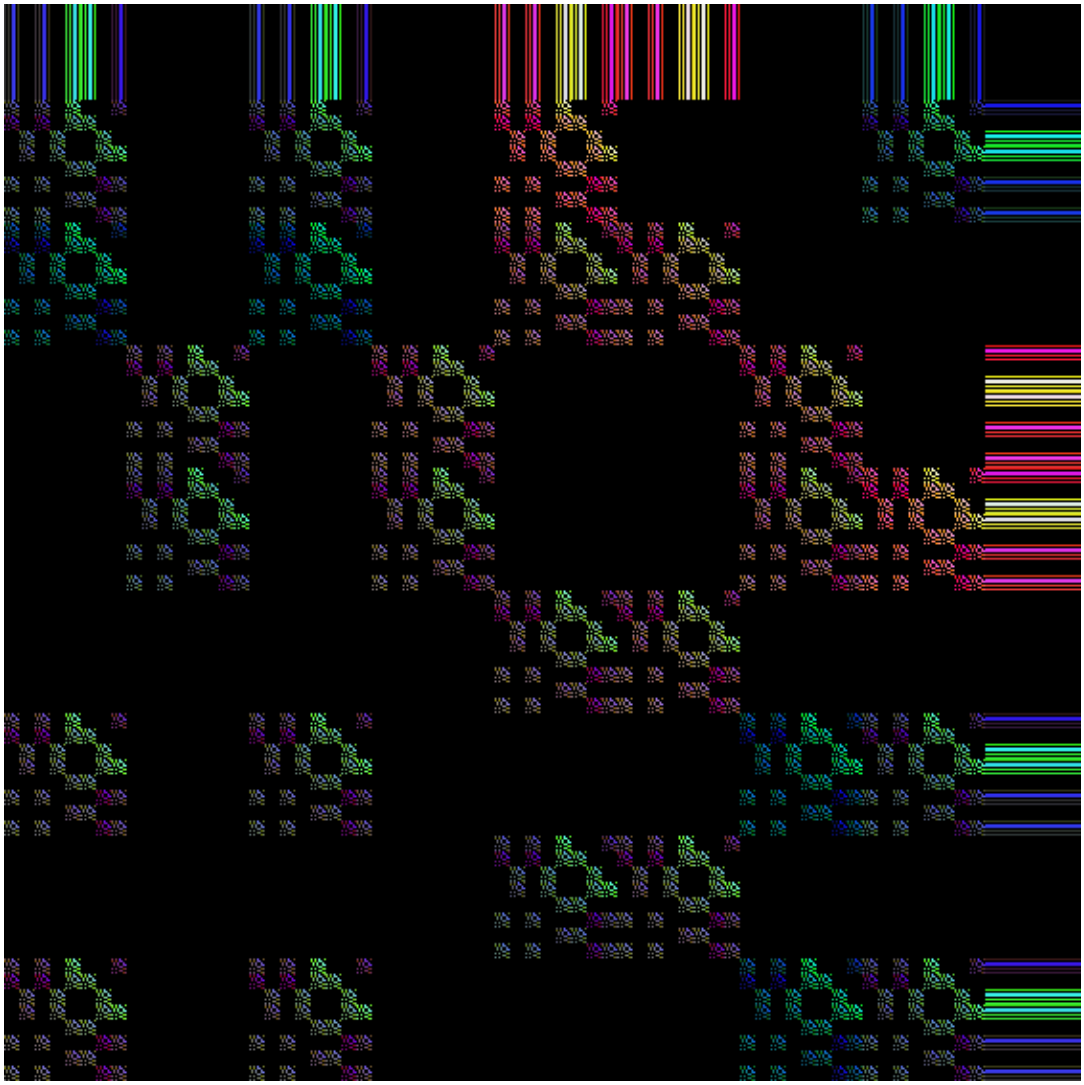


74 0.2454 −0.4796 0.2056 −0.3192 0.8490 0.9232 −0.1659 0.1071



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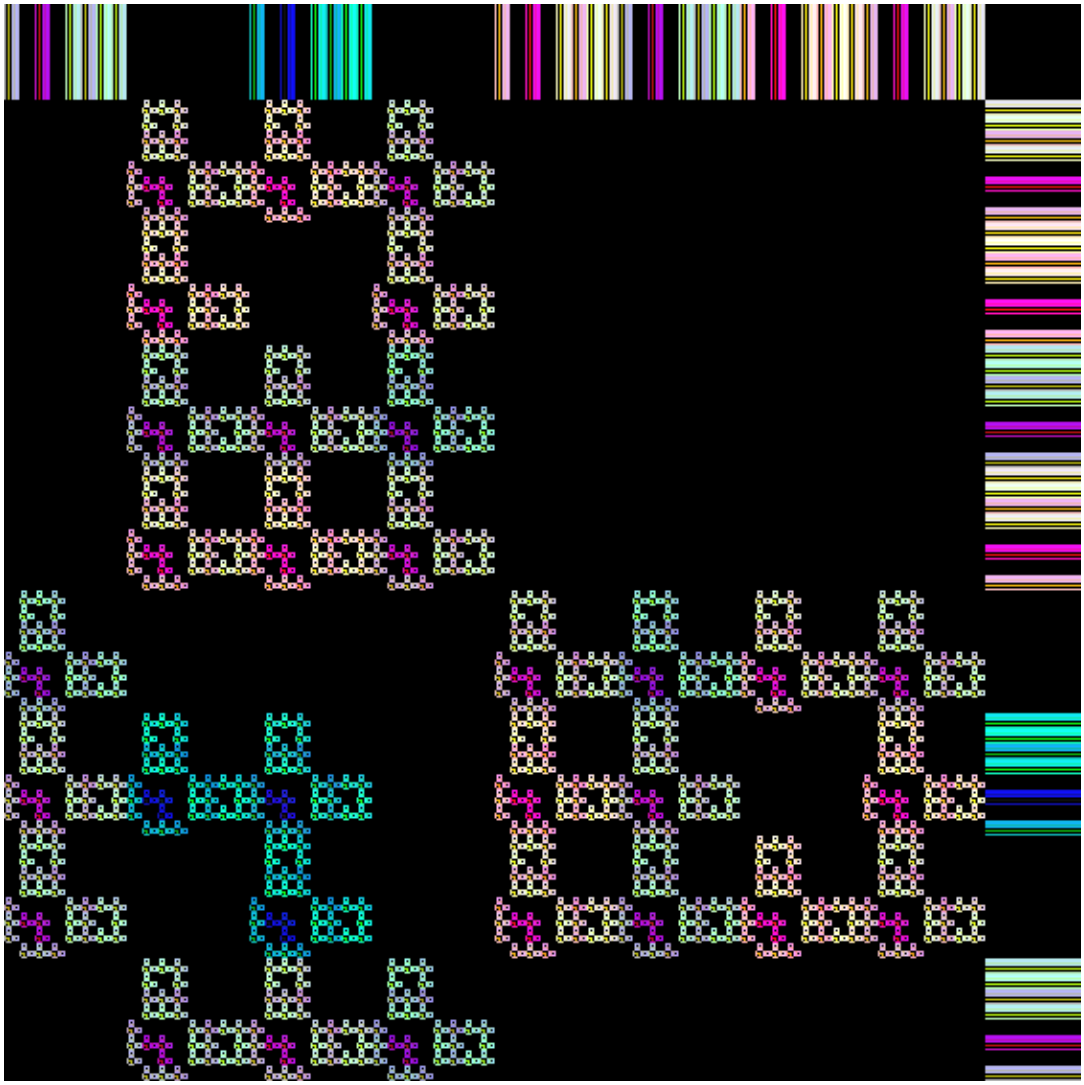

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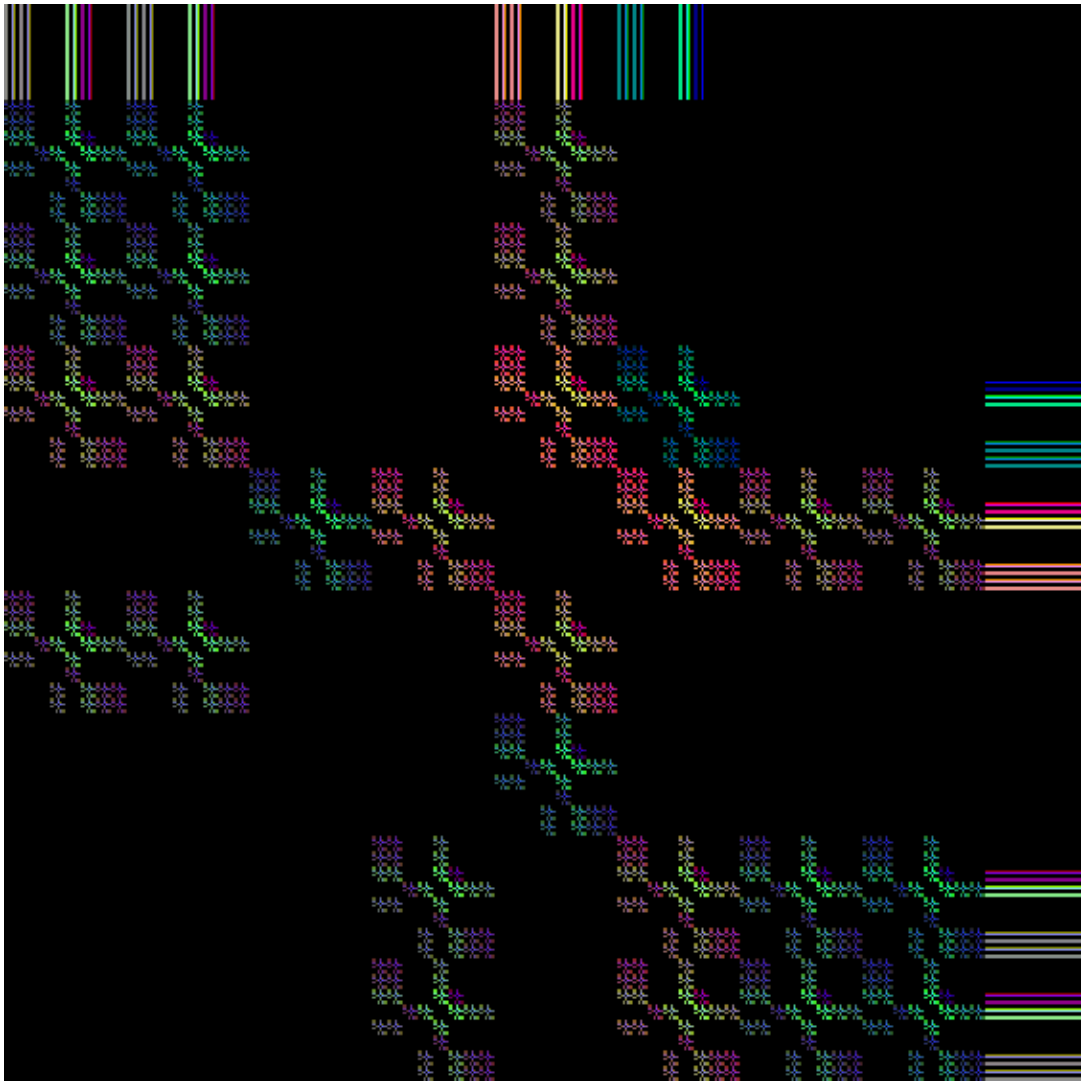
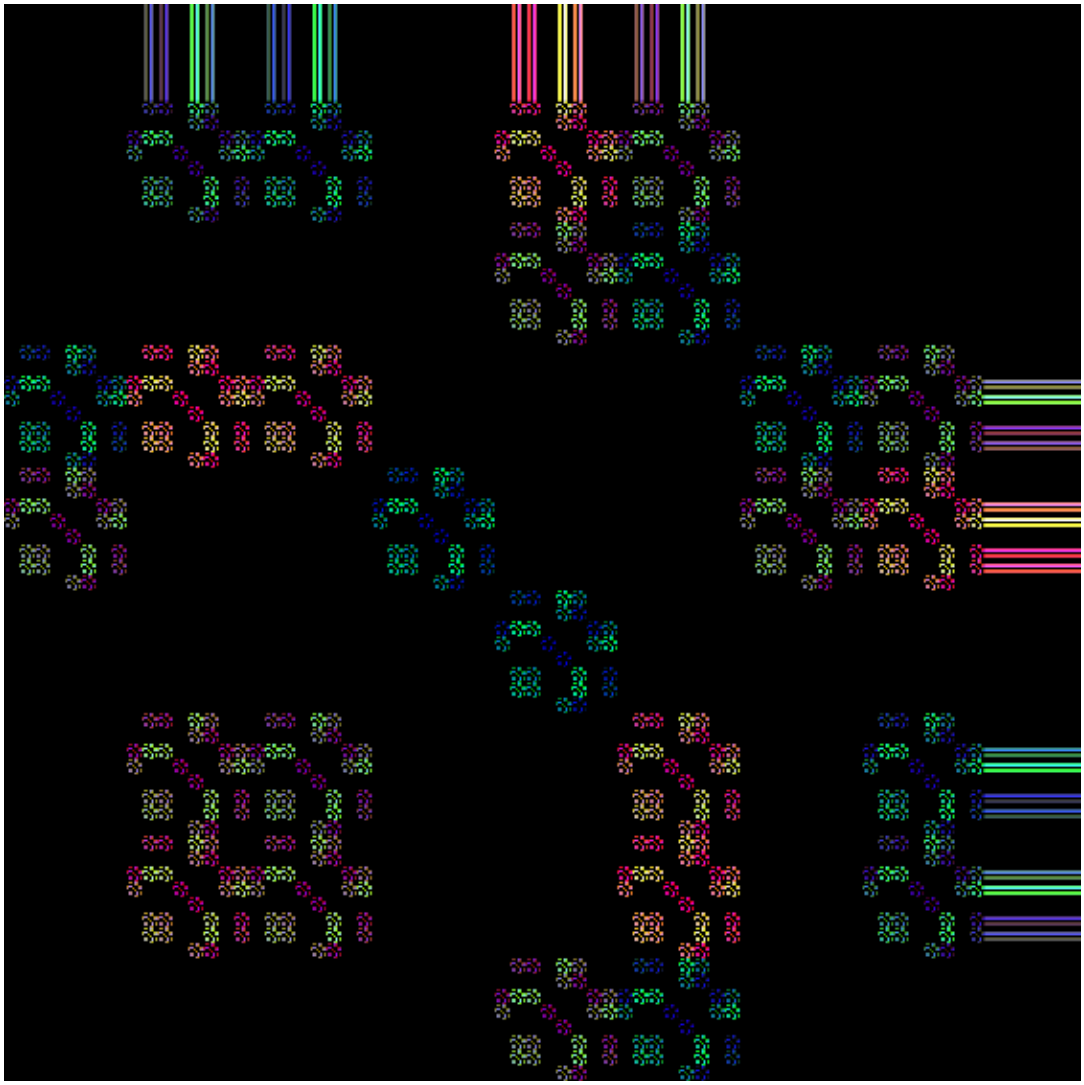
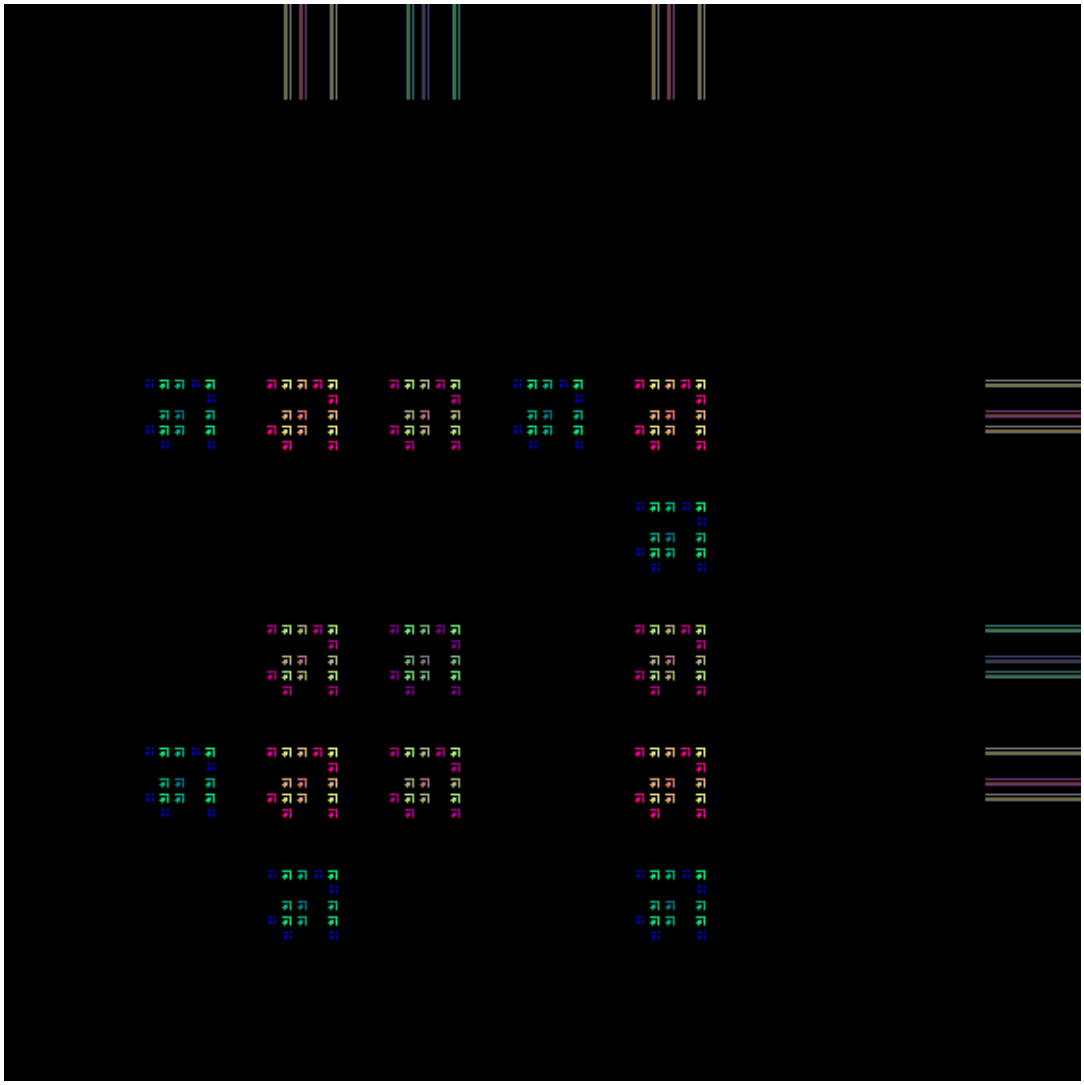


77 −0.4570 0.3581 0.2220 −0.9744 0.9505 0.5408 −0.4547 −0.1084



78 −0.6171 −0.4323 0.4276 0.2332 −0.4477 0.4583 −0.6898 −0.6563



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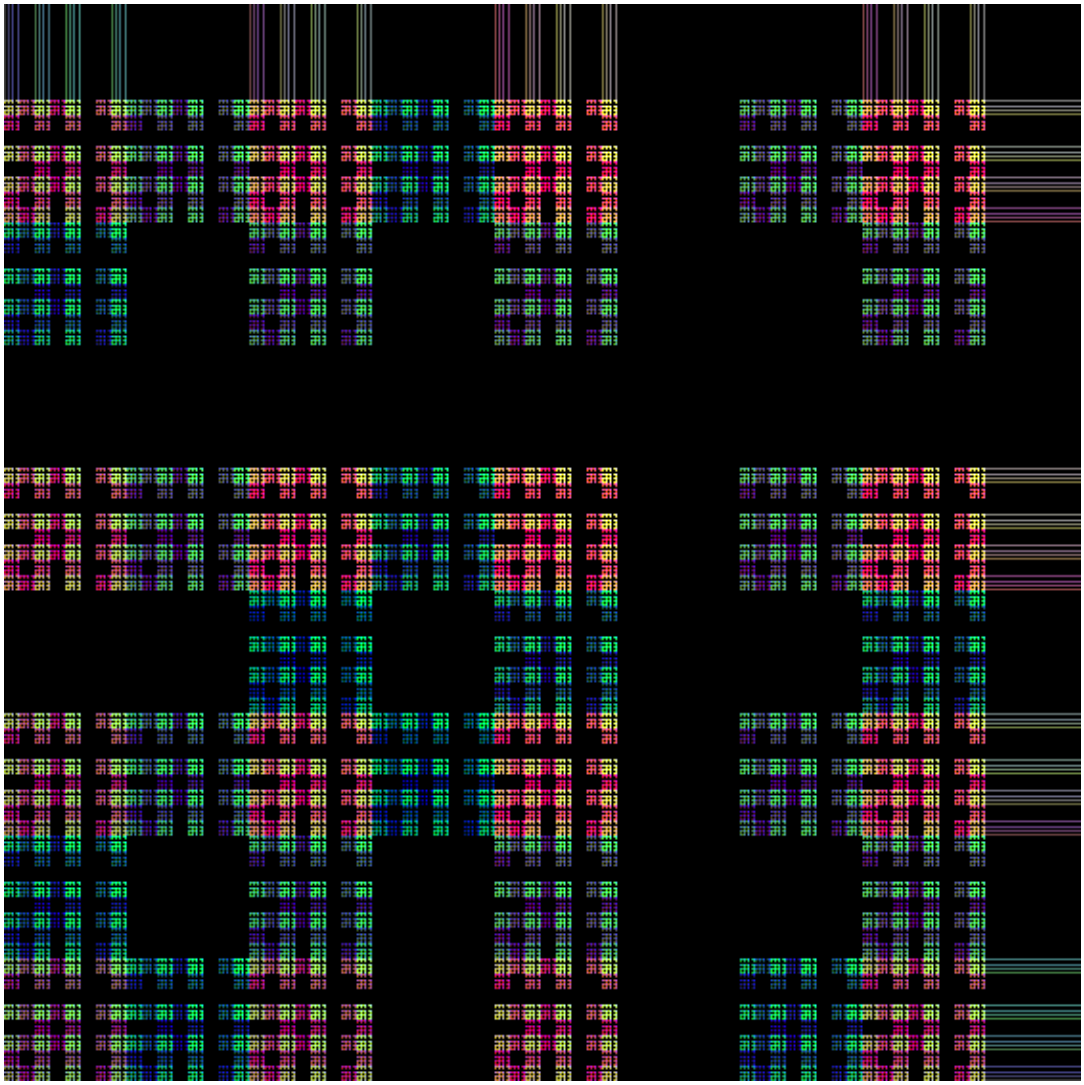

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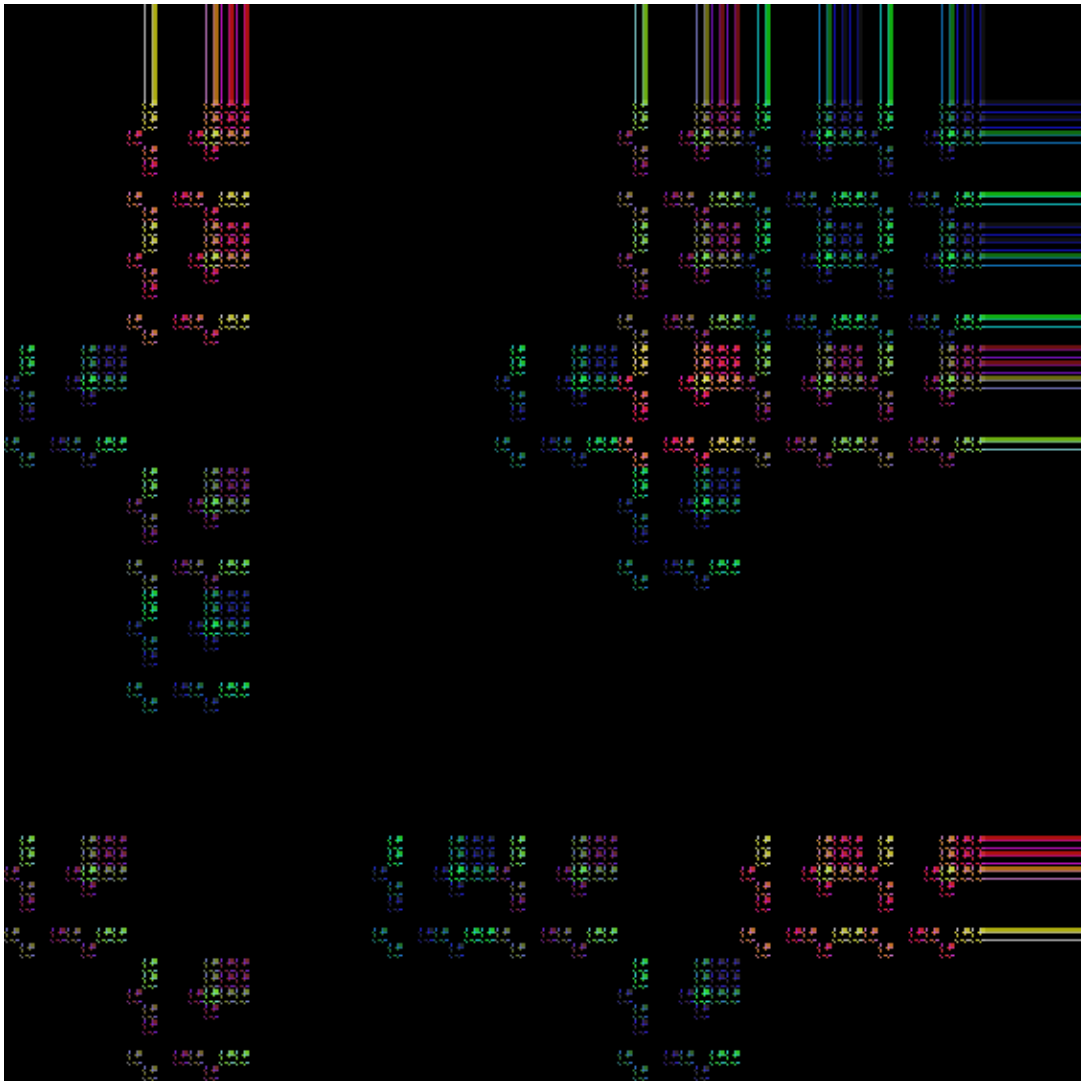

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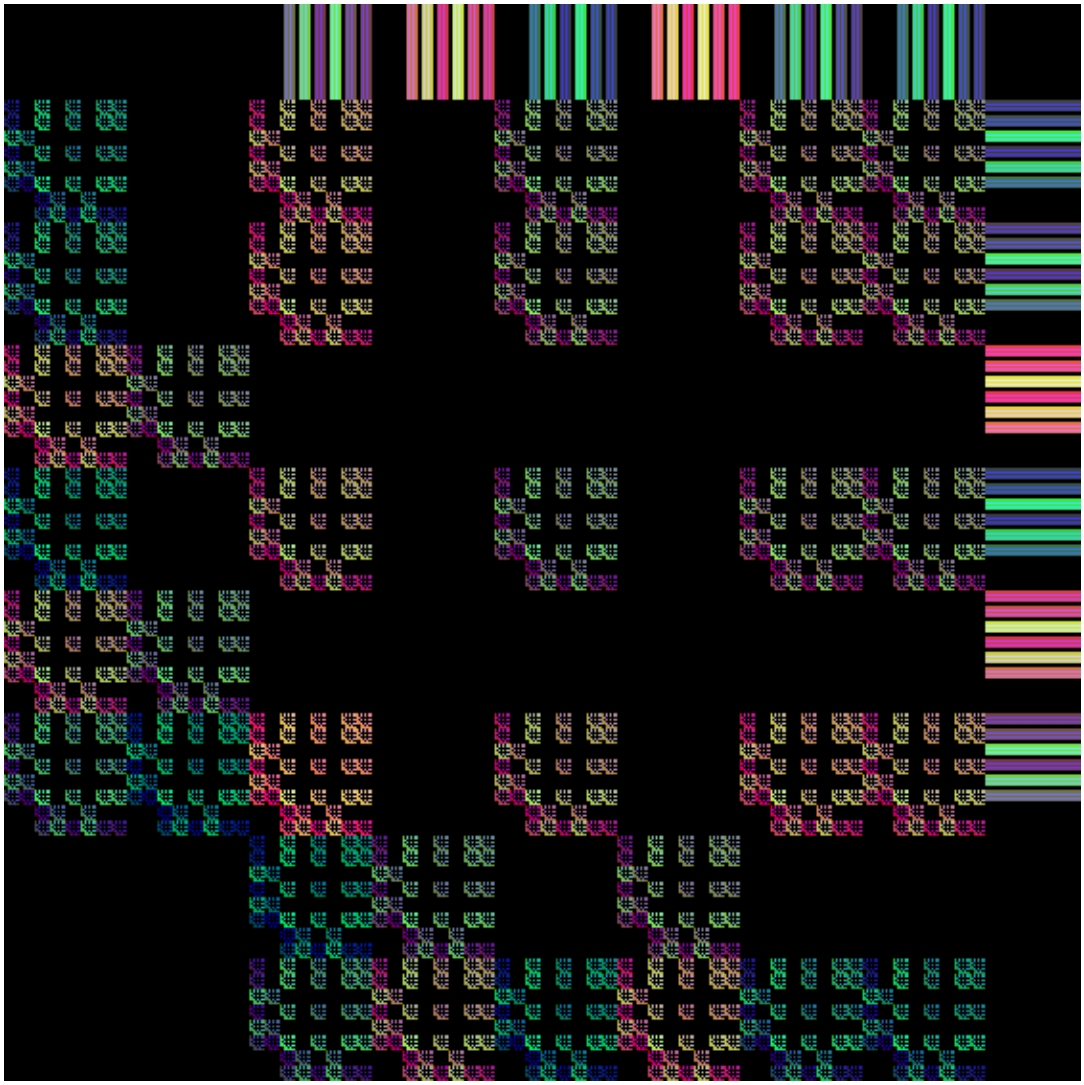

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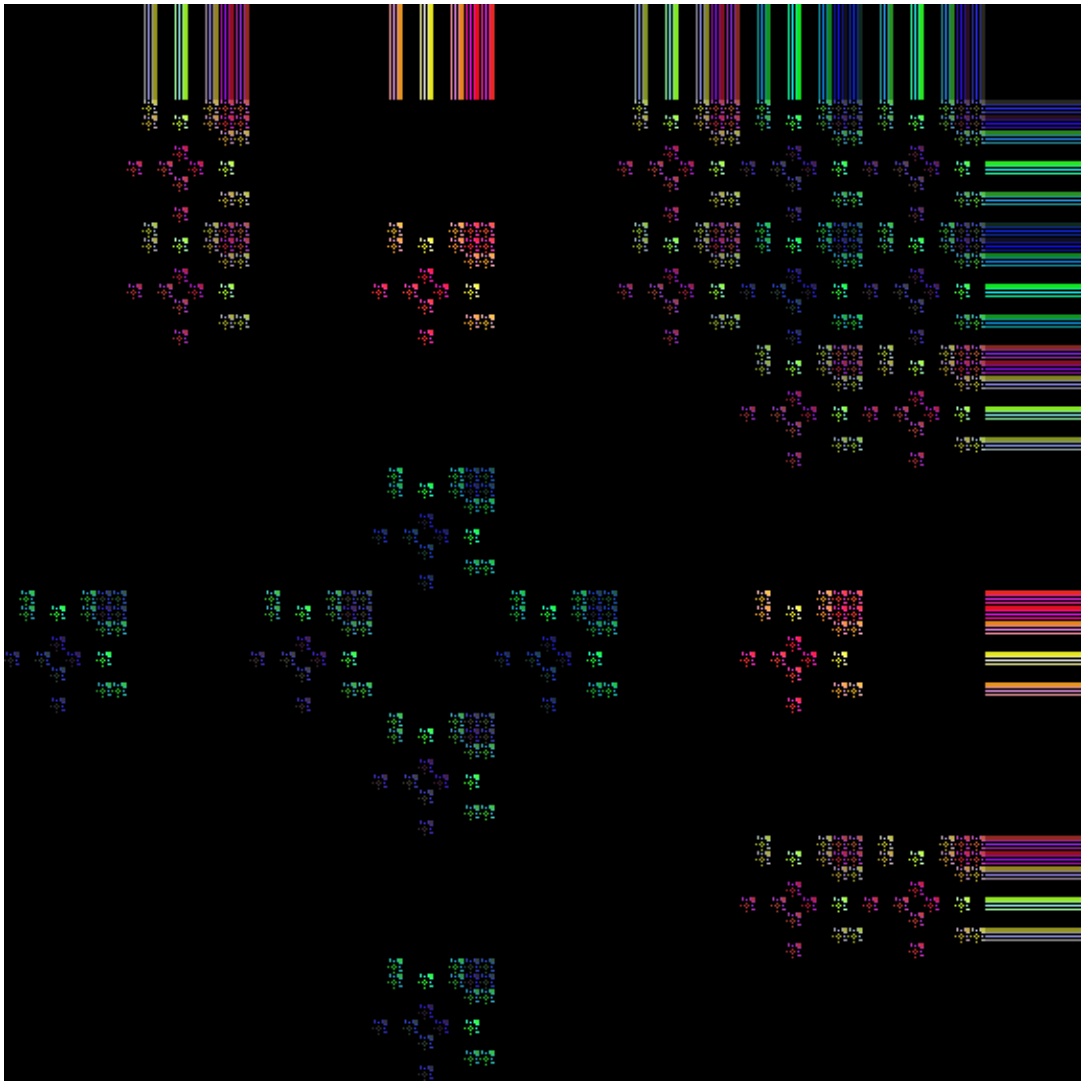

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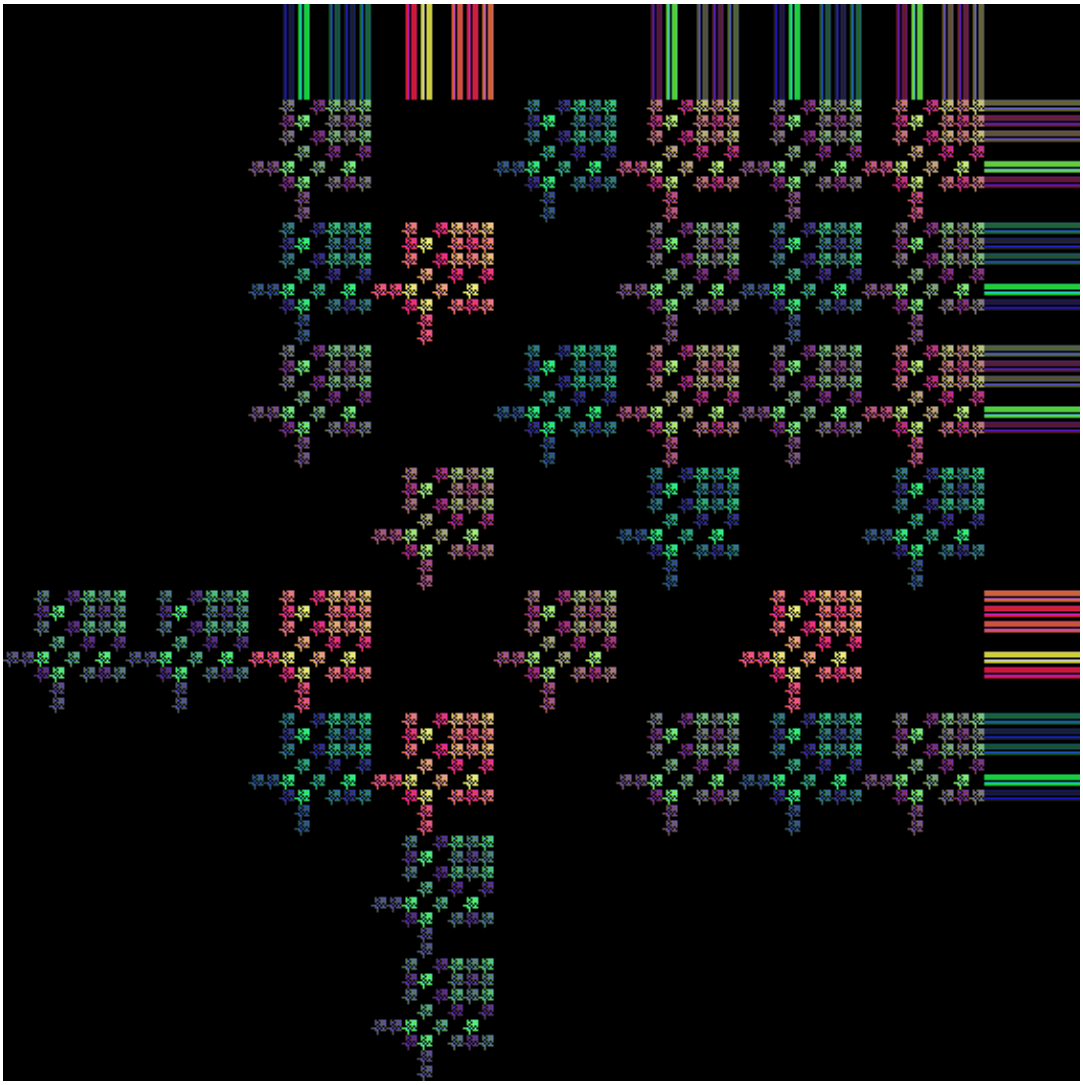

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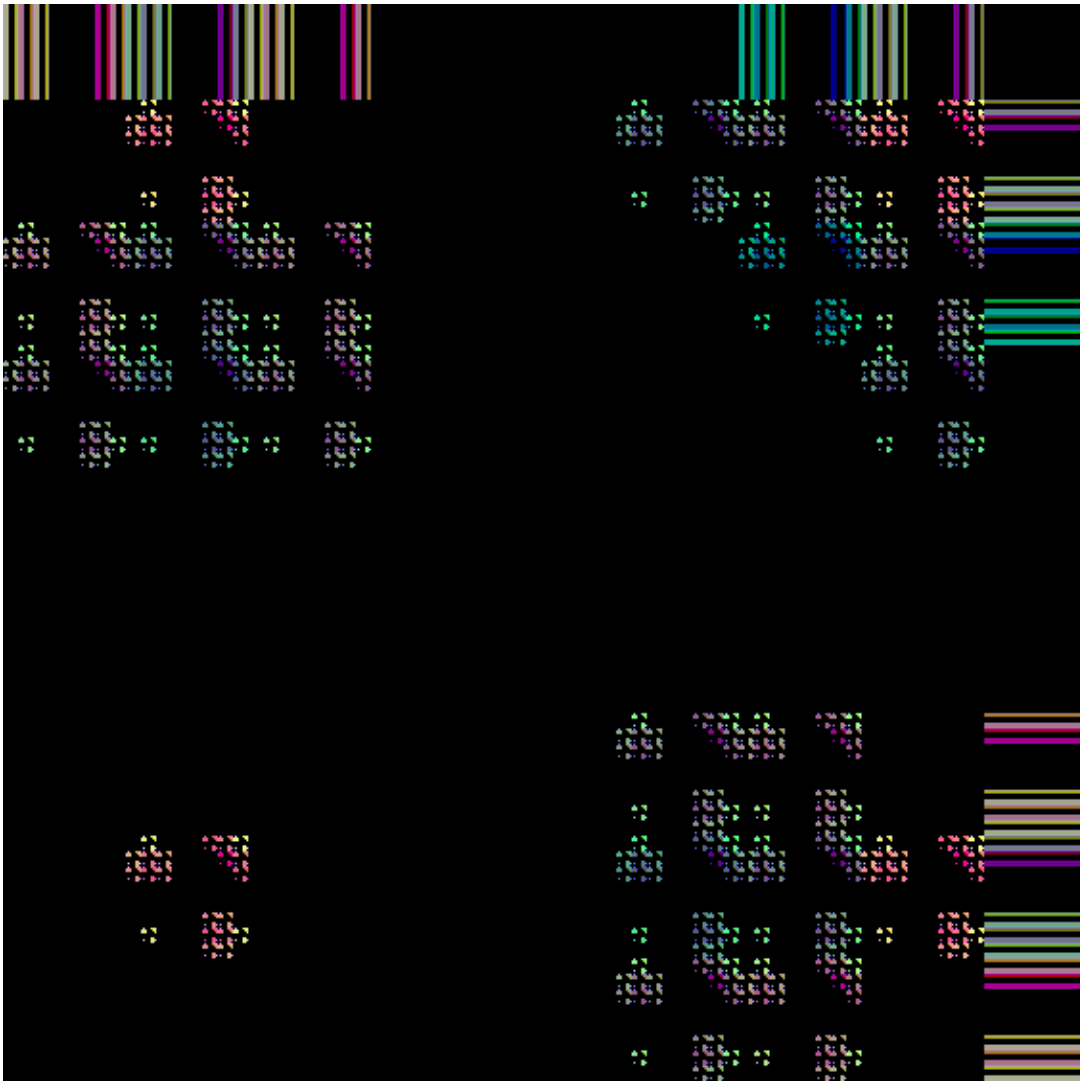

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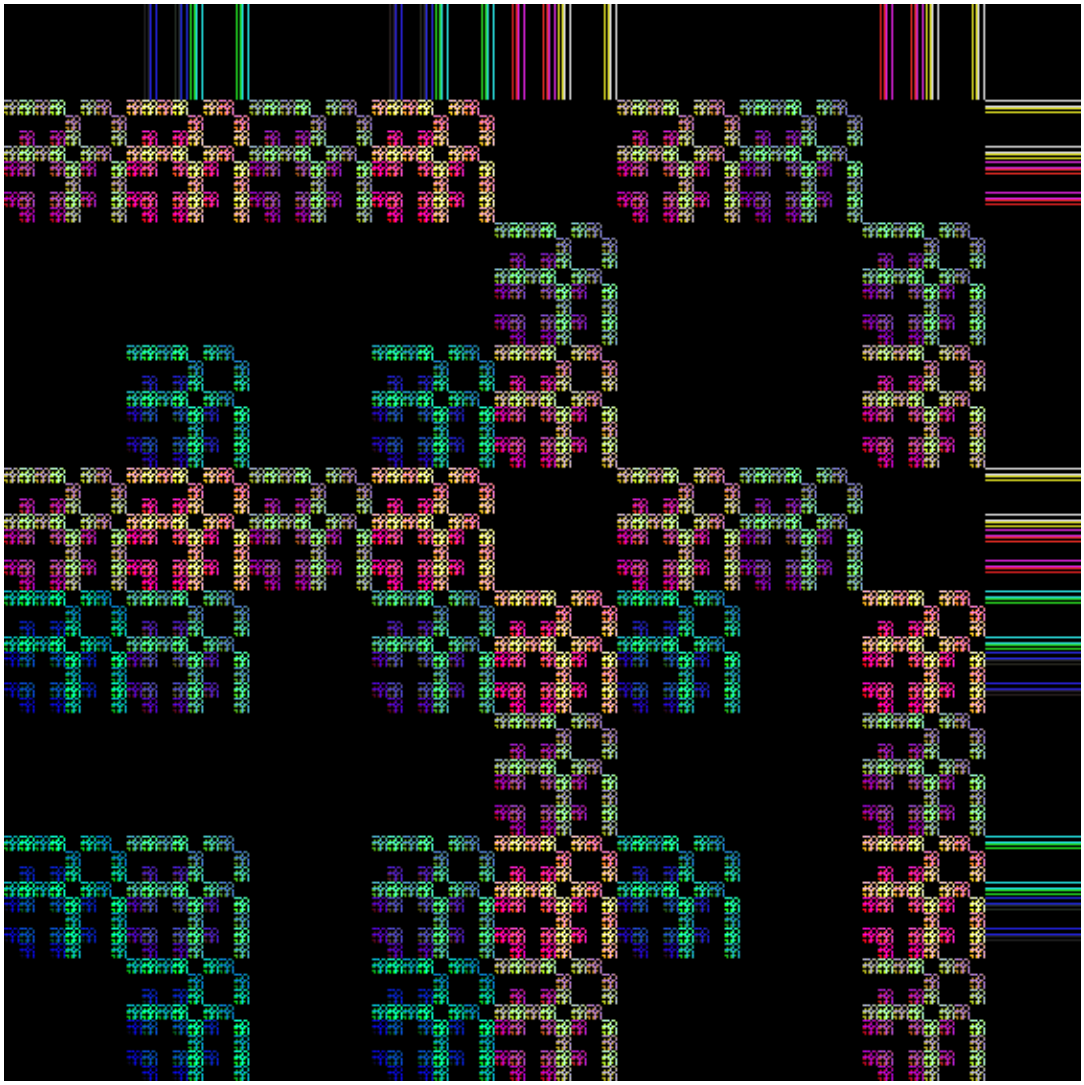

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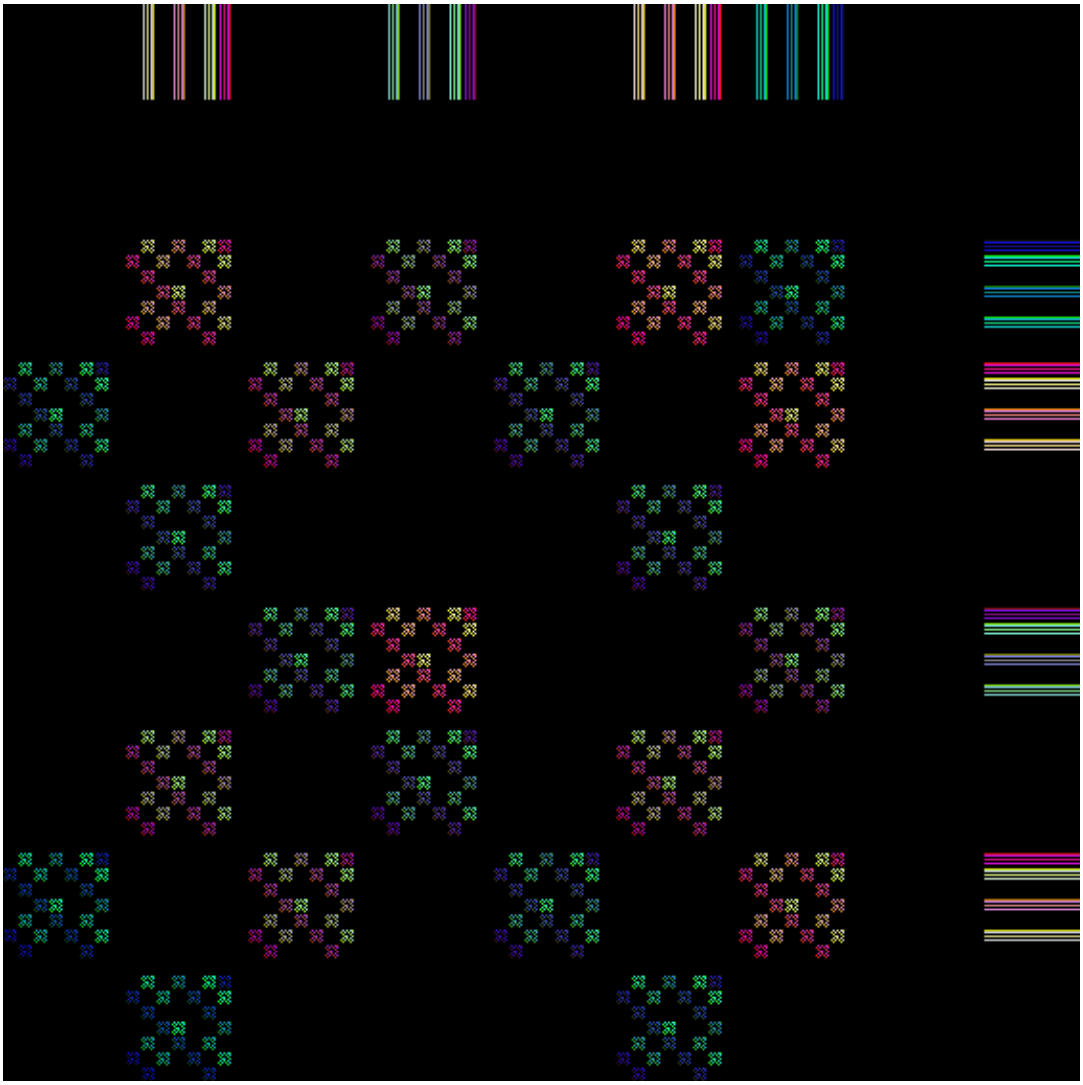

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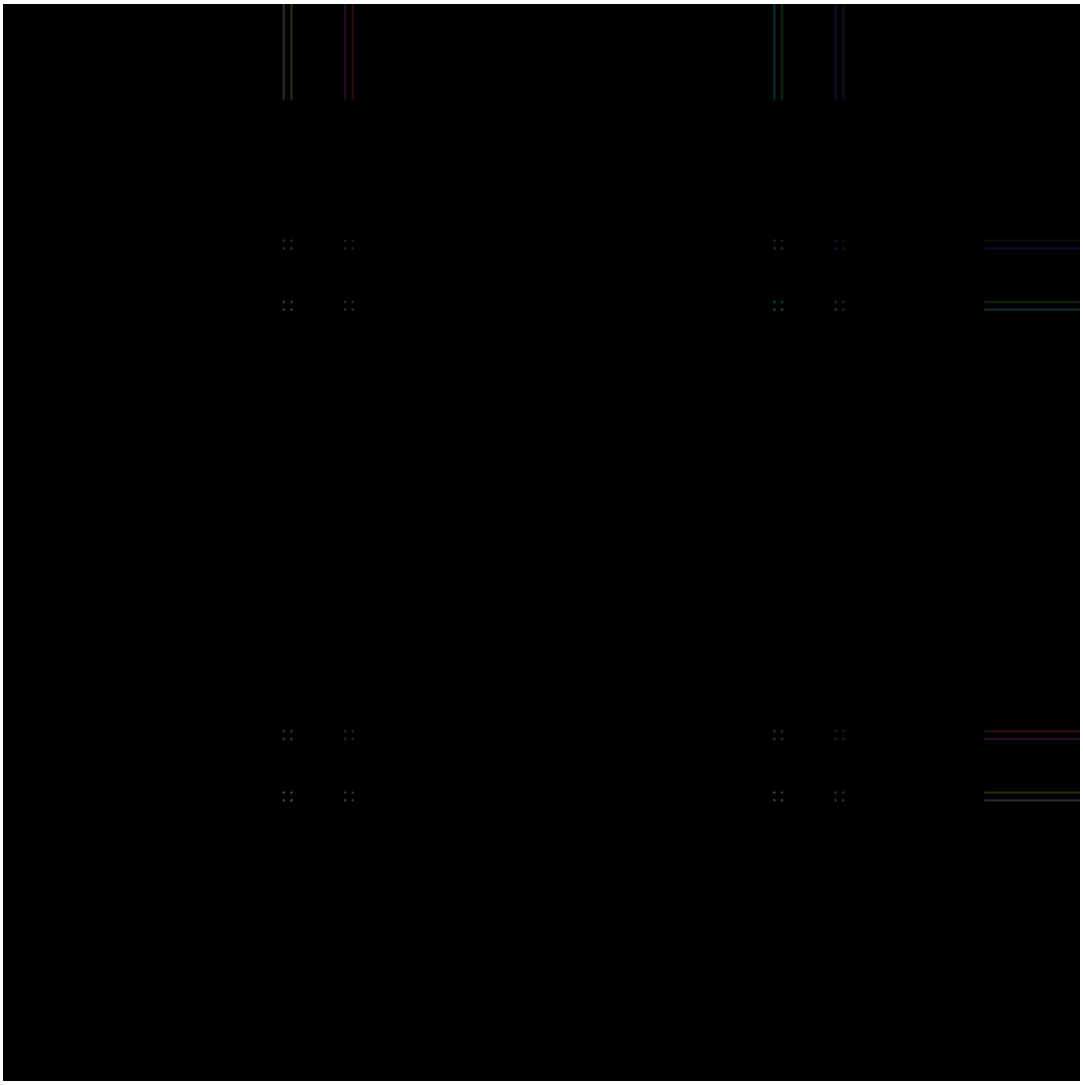

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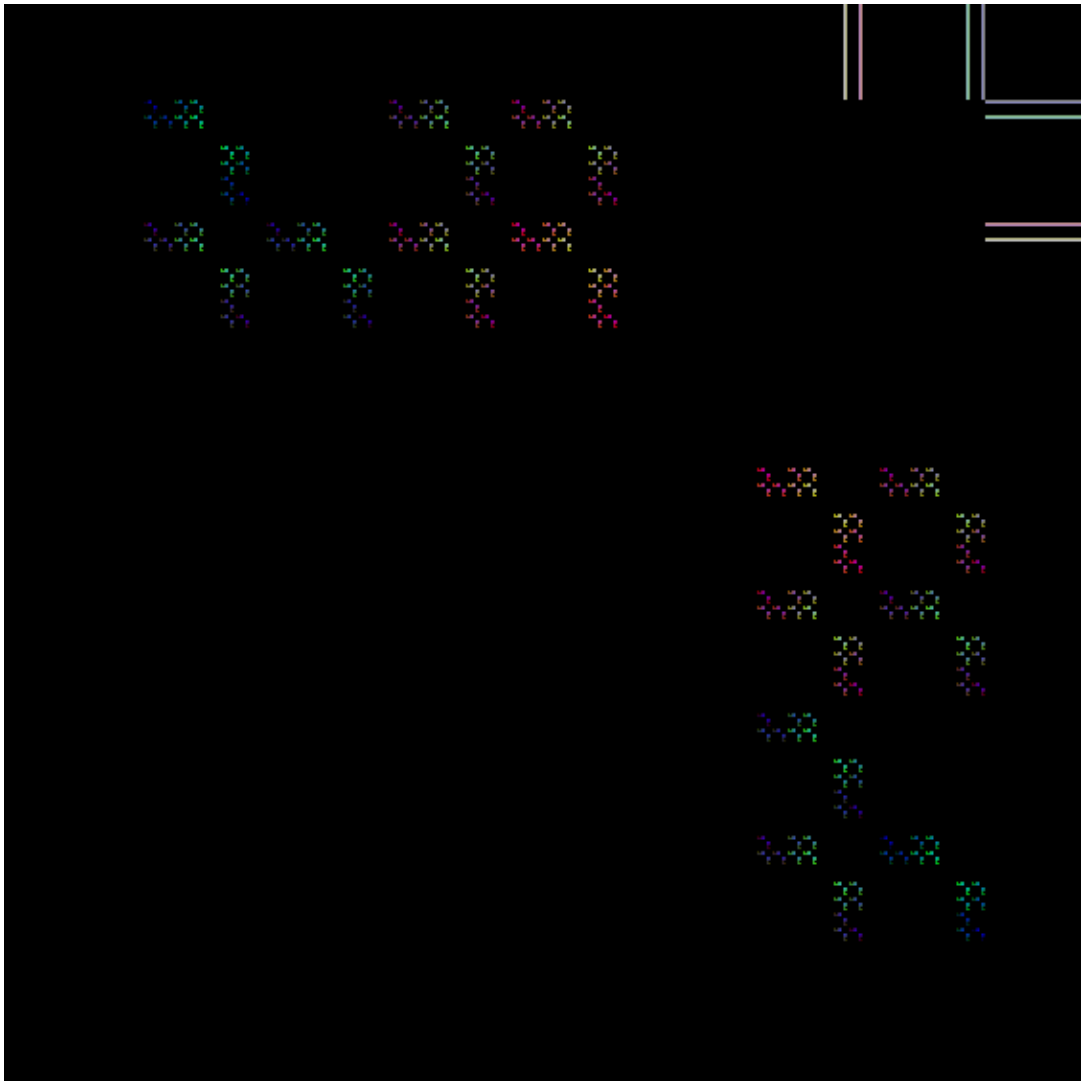

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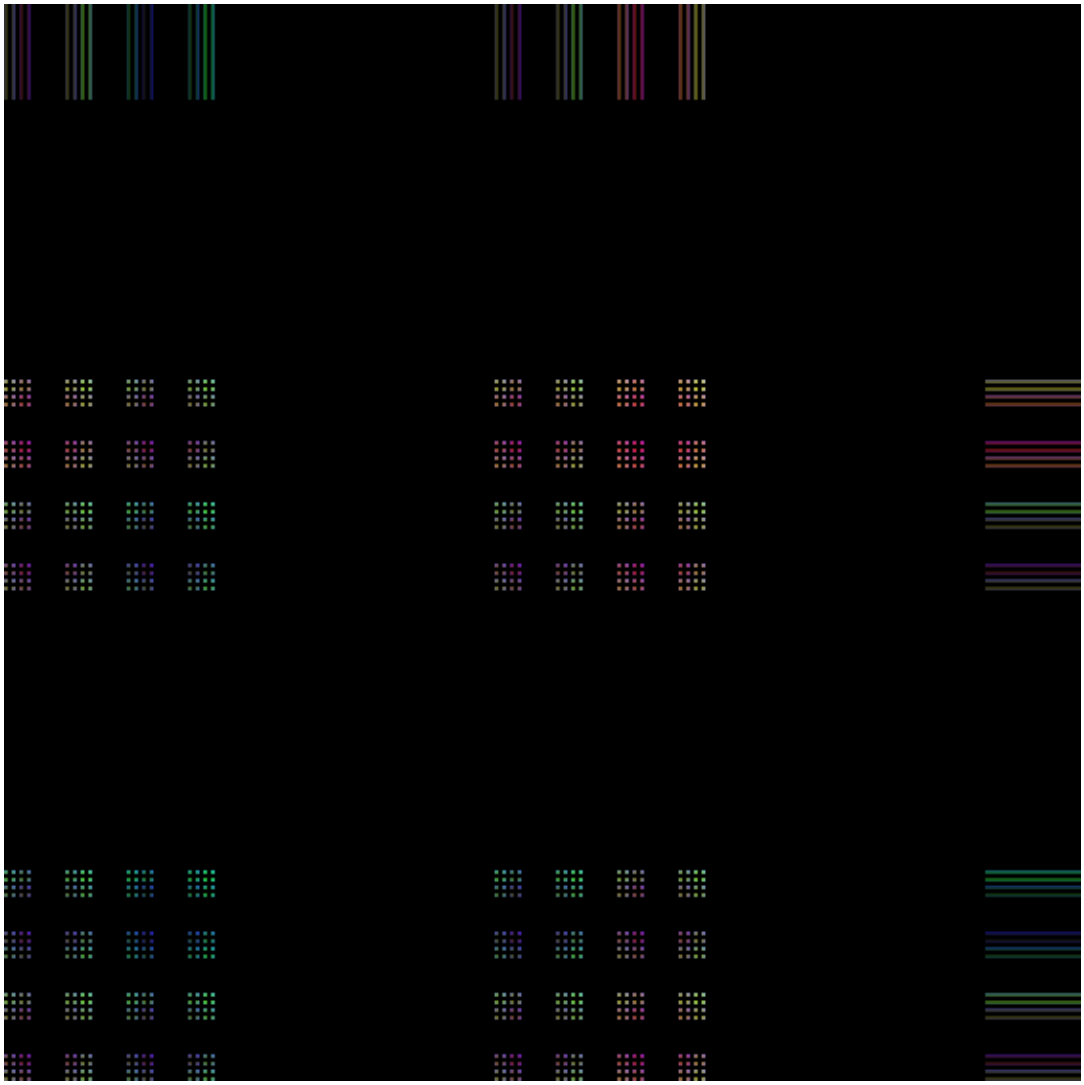

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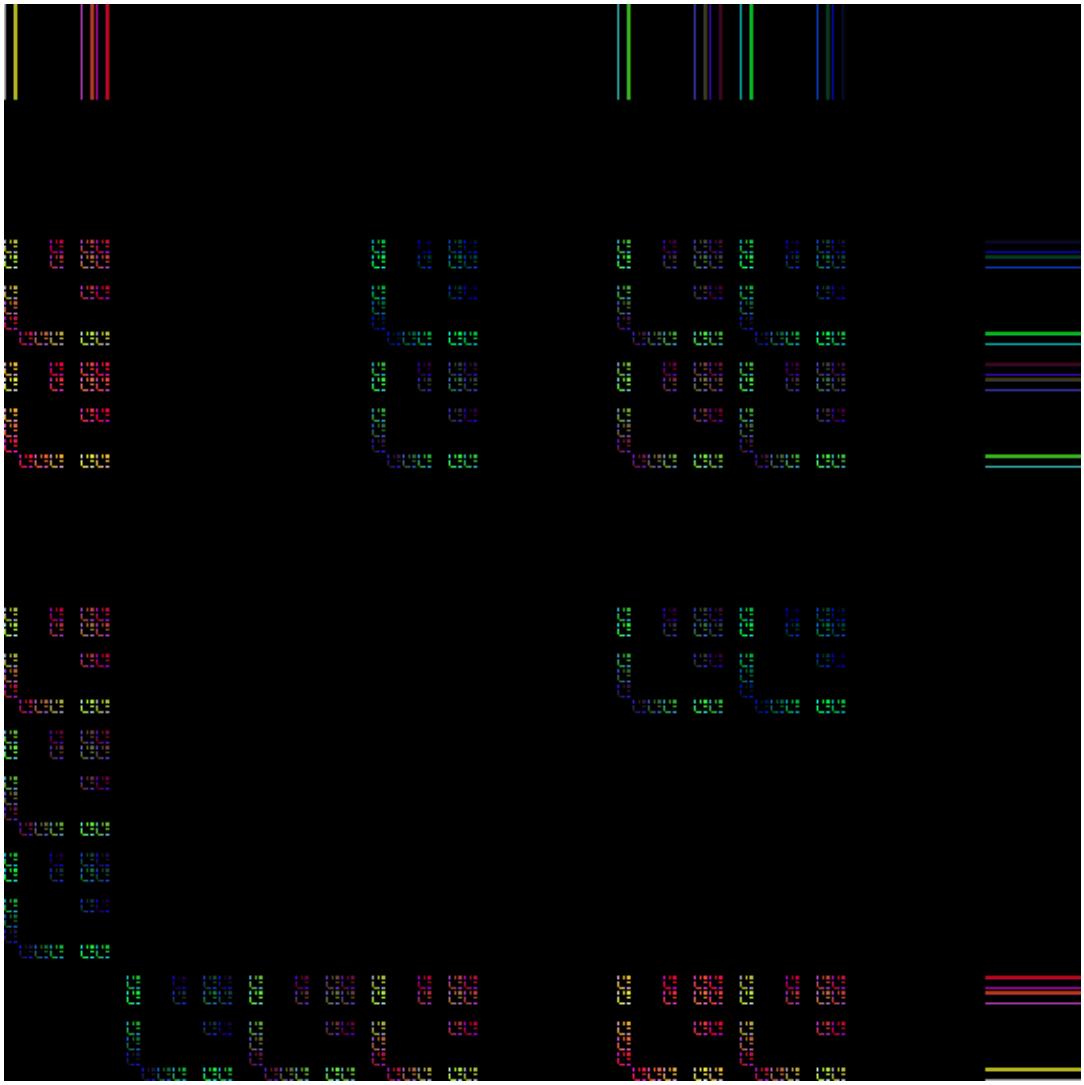
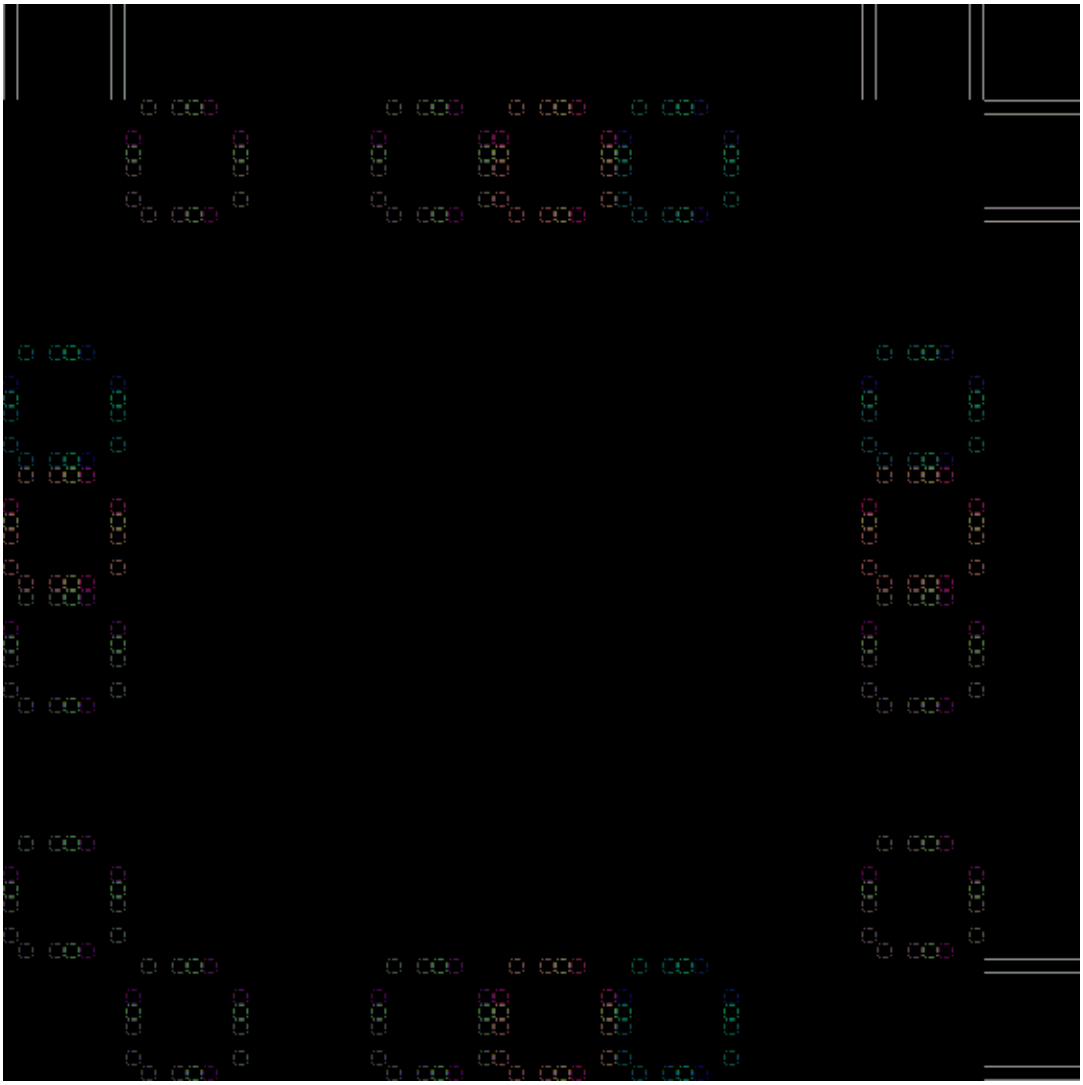
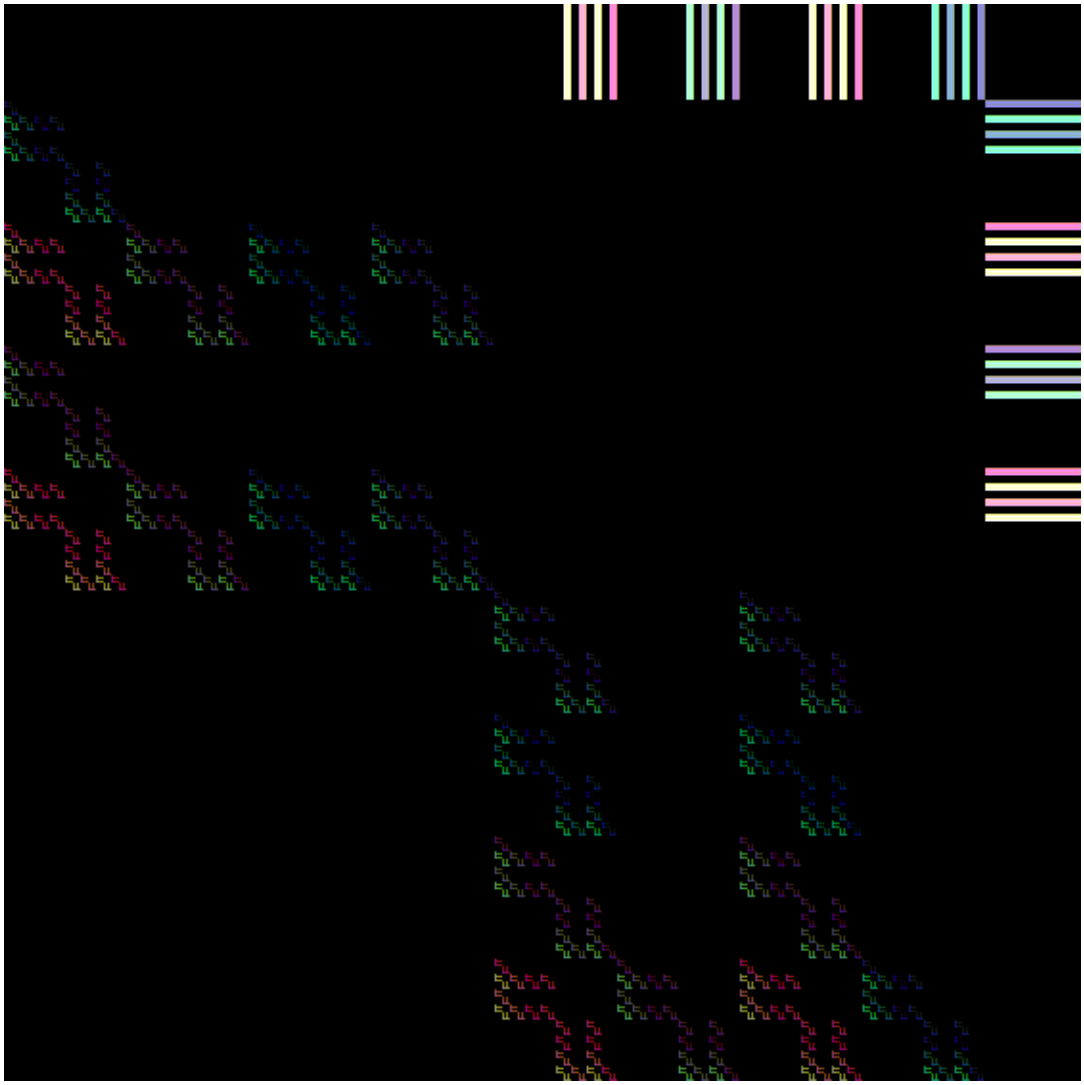


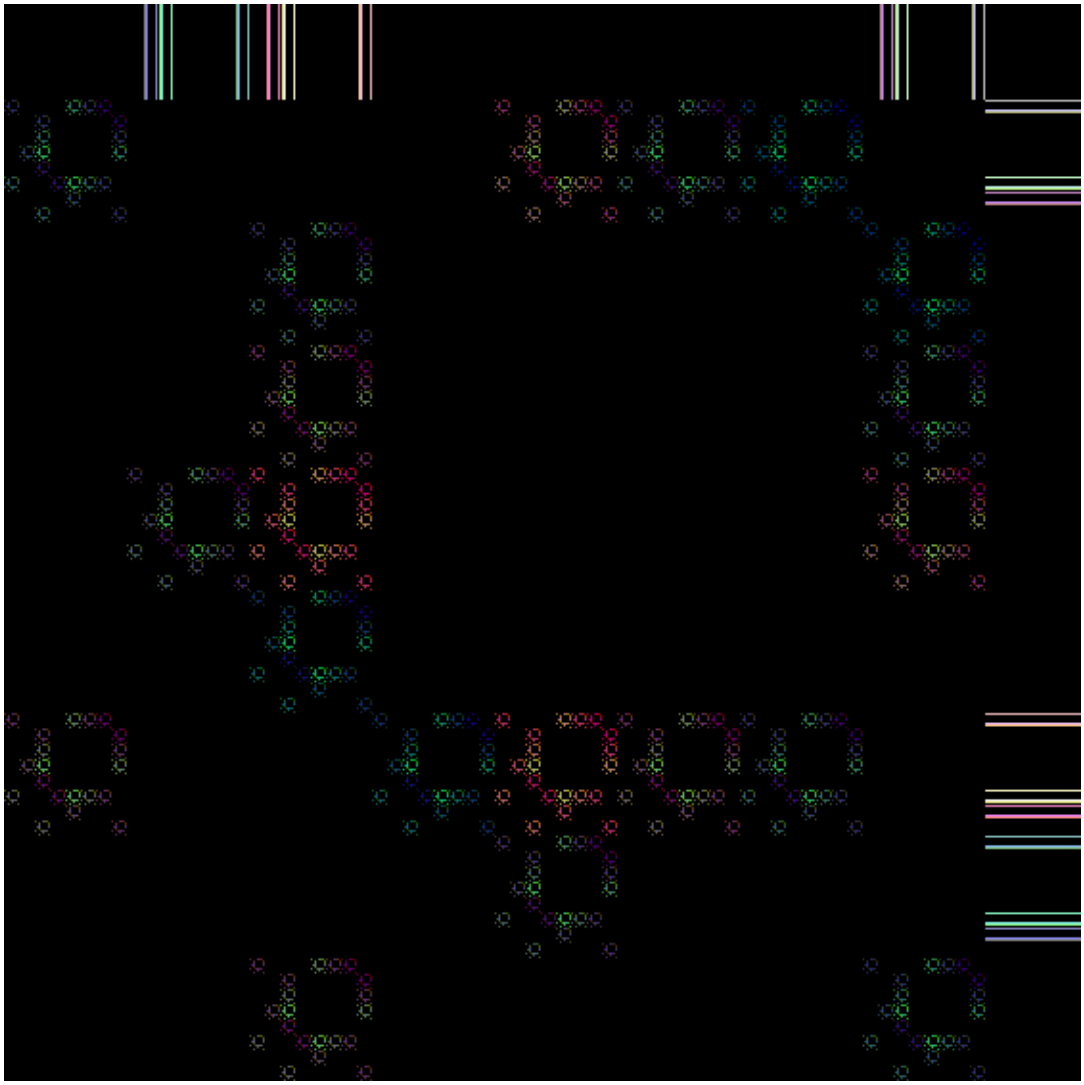
91 0.5400 −0.2702 −0.7017 −0.2744 −0.09839 −0.4872 −0.8306 0.5875



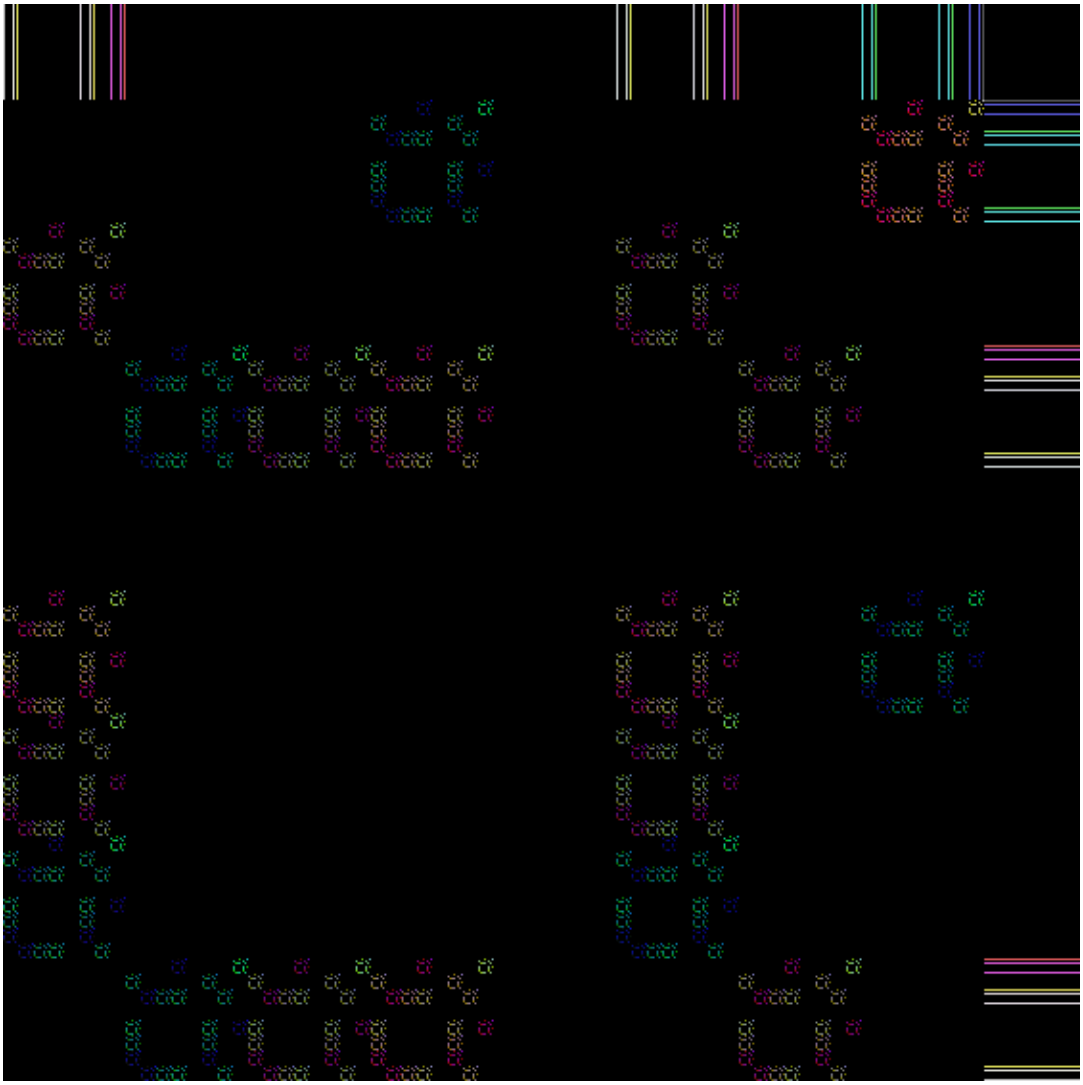
92 −0.4636 −0.7344 −0.9576 −0.8857 0.9992 0.7143 0.9808 0.5342



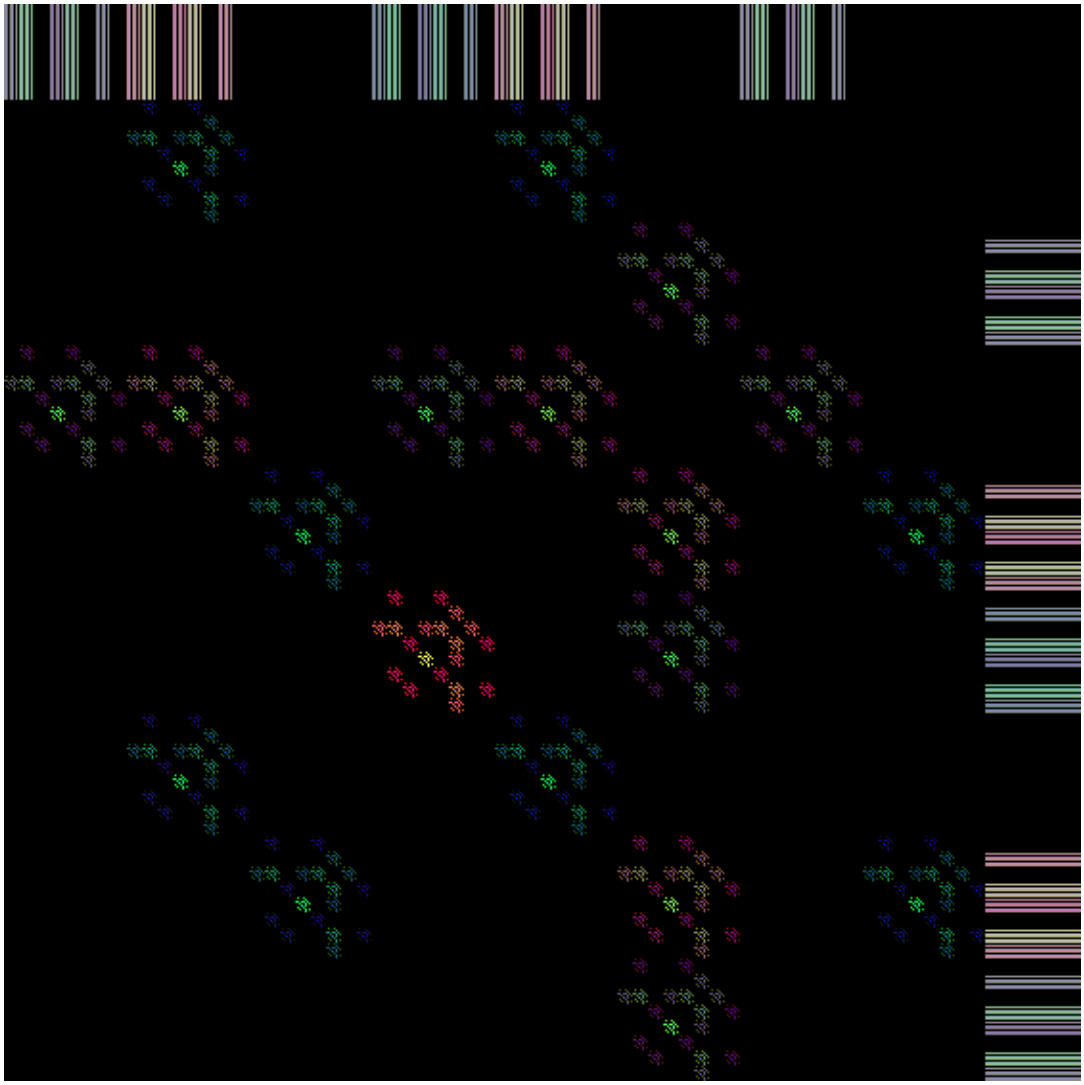
93 −0.5822 0.5210 0.9367 −0.8694 −0.2532 −0.5367 −0.7348 0.7457



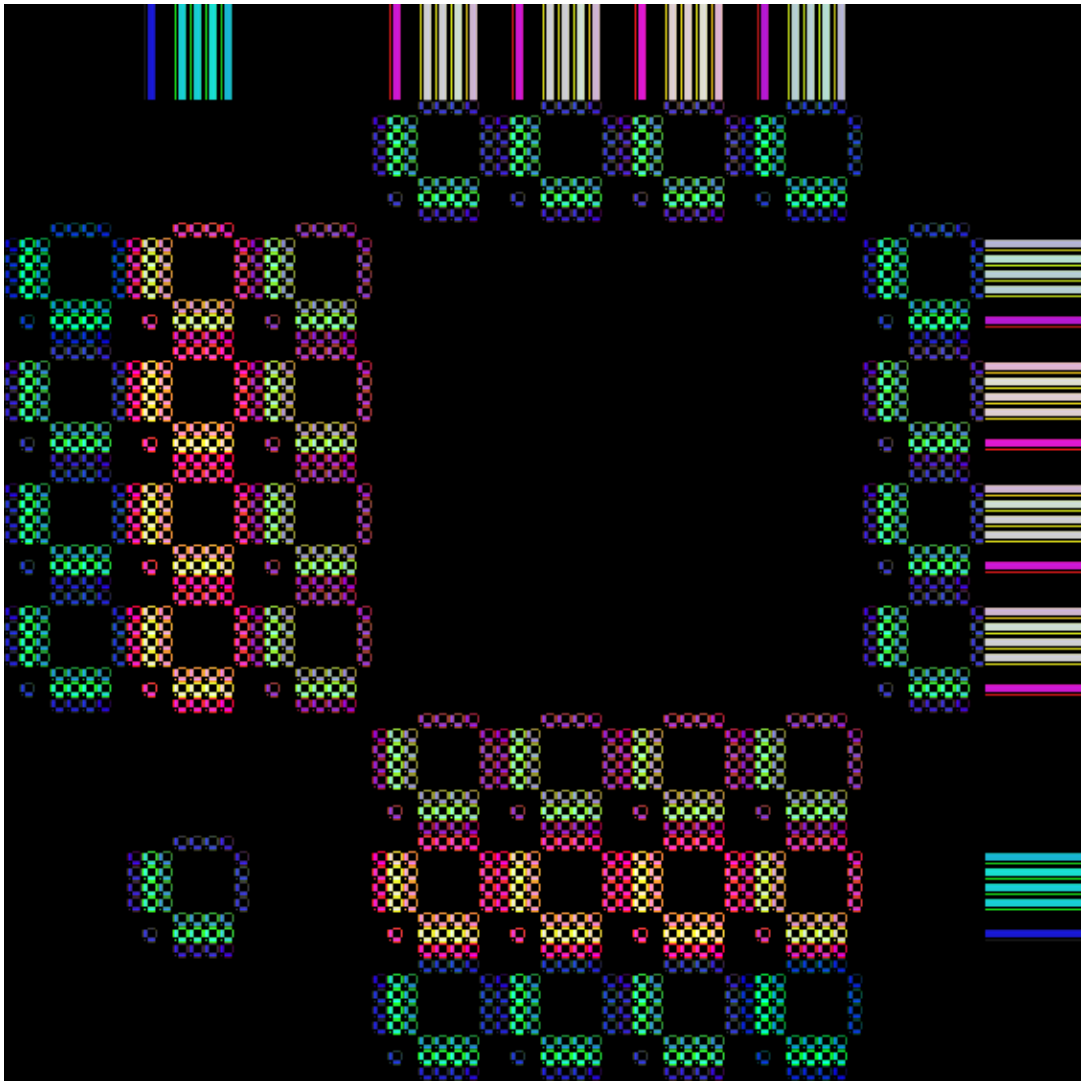
94 0.8669 −0.7916 −0.4560 −0.3308 −0.9400 0.8364 −0.3878 0.3653



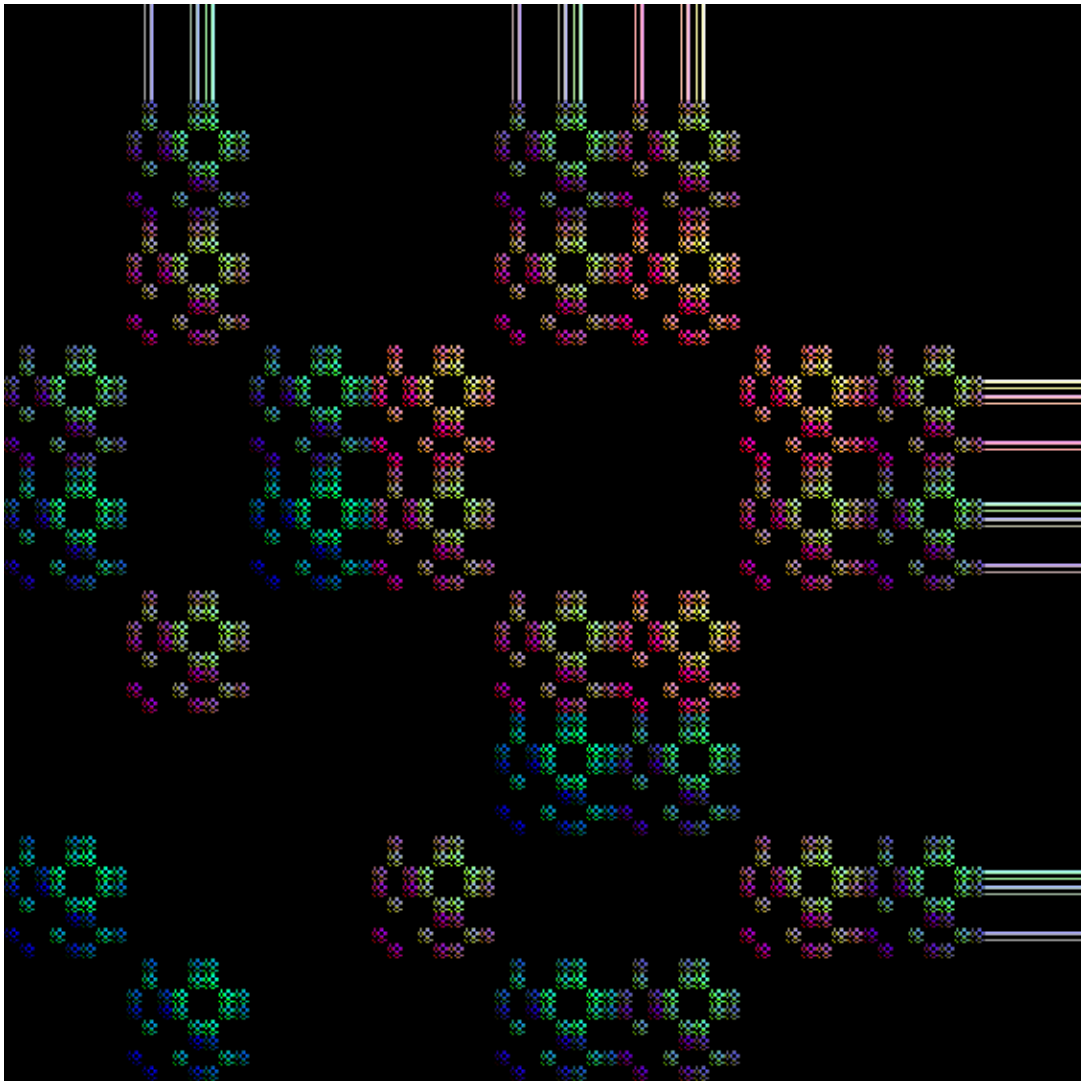
95 0.5530 0.7391 −0.6155 0.4906 0.6938 −0.1907 0.5461 −0.6563



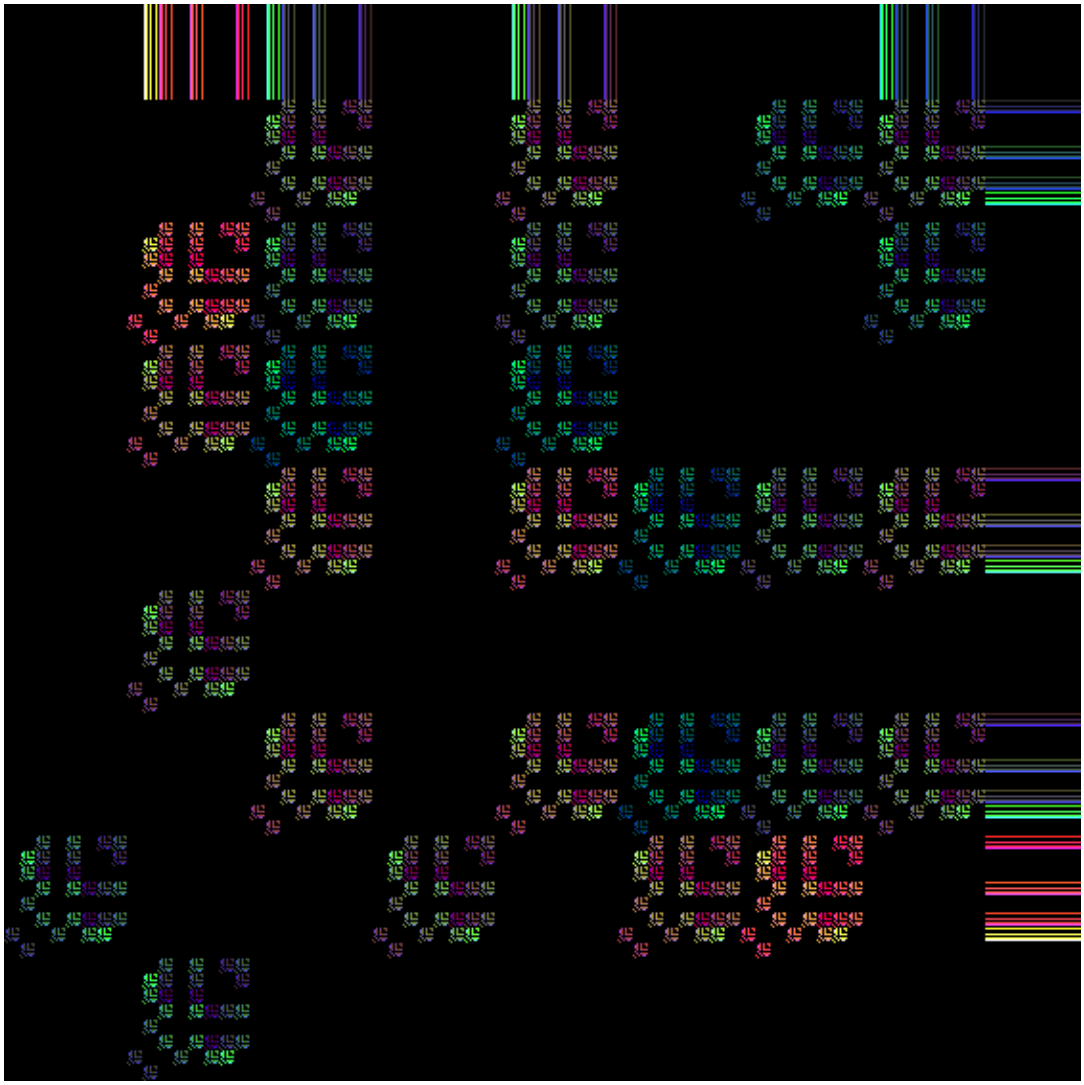
96 −0.6609 0.1205 −0.2062 0.7908 0.7934 0.8650 0.7137 −0.5688



97 −0.6165 0.6390 −0.7211 −0.07031 0.7396 0.9612 −0.01135 −0.2886



98 −0.7192 0.9753 0.2882 −0.5244 0.3470 −0.2927 −0.01178 0.1747



99 0.2614 0.6682 0.9167 0.4698 −0.8314 −0.5095 0.7625 −0.7197