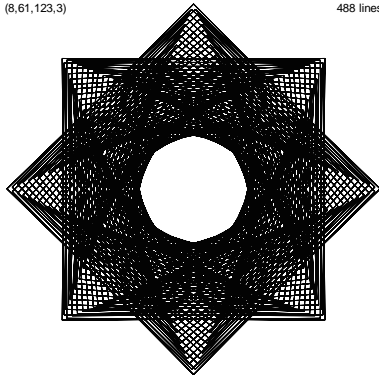


(8,61,123,3)

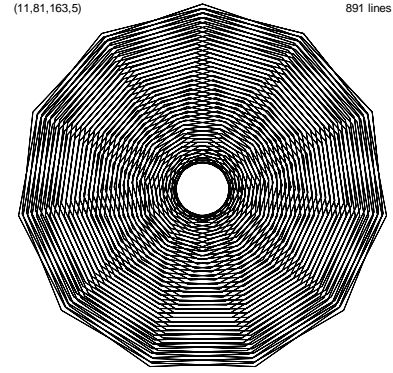
488 lines



Pulsing Images

(11,81,163,5)

891 lines



The two images at the top are completed versions of the first cycles shown at bottom [left](#) and [right](#). If you view either image in *drawing mode* using the links below you will see that the polygons pulse in and out as they complete each cycle.

These images used a version of the String Art file that allows one to automate S as a function of n , a , and T , much like the automating P file controls P .

Setting $P = 2S \pm 1$ ensures [one level change](#) images with $GCD(S,P) = 1$. The term a in the S function is included to control where the first cycle ends in order to create images that are [one time around](#) (MA. This is because $P \cdot J$ is $MMI \text{ MOD } n$.)

As you can tell from the first three images below, the parameter T controls the number of "replications" of the image seen. Each image is symmetric on the line from vertex 5 to midway between 0 and 1 . Think of the cross-overs as the ends of fingers that are just touching and are hugging a central figure. One can see $T-1$ sets of arms, alternating finger-touch sides with each hugging all prior sets of arms like (slightly off-center) nesting dolls (or 2 crabs fighting).

These pulsing images need not be n -gons matching the n in the underlying image as witnessed by the lower left image. The subdivision points have been included in this image. Notice that every 4th point on the 1st, 3rd, 5th, and 7th line of the VF is used in this instance but no points on the even VF lines are used in the first cycle. The second cycle reverses this pattern. This pattern is quite different from the other images which use points on all of the VF lines in the first cycle.

1st cycle given $n = 13$, $J = 6$, $S = a + (T-1) \cdot n$, $P = 2S-1$ for $T = 2, 5, \& 10$. Imagine $T-1$ hugging arms nesting dolls per cycle.

(n, S, P, J)
(13, 19, 37, 6)

13&0

19 lines/cycle
247 lines

(n, S, P, J)
(13, 58, 115, 6)

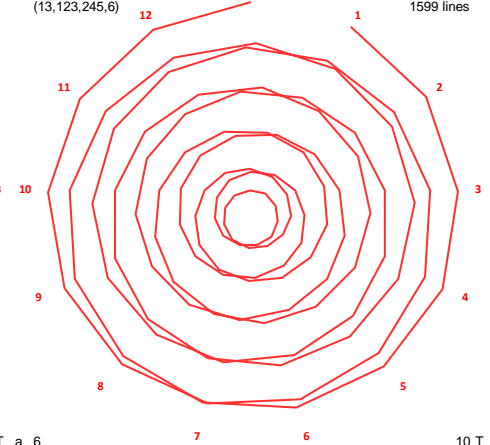
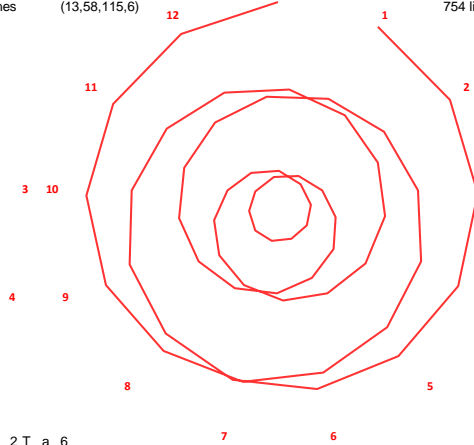
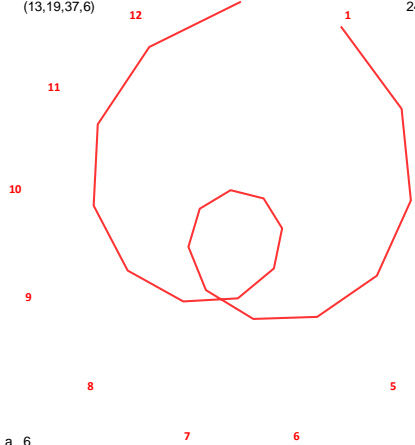
13&0

58 lines/cycle
754 lines

(n, S, P, J)
(13, 123, 245, 6)

13&0

123 lines/cycle
1599 lines



[Pulsing squares \(DL = 4\)](#) $P = 2S+1$

[Pulsing 7-gons \(DL = 7\)](#) $P = 2S+1$

[Pulsing 11-gons \(DL = 11\)](#) $P = 2S+1$

(n, S, P, J)
(8, 61, 123, 3)

8&0

61 lines/cycle
488 lines

(n, S, P, J)
(7, 58, 117, 3)

7&0

58 lines/cycle
406 lines

(n, S, P, J)
(11, 81, 163, 5)

11&0

81 lines/cycle
891 lines

