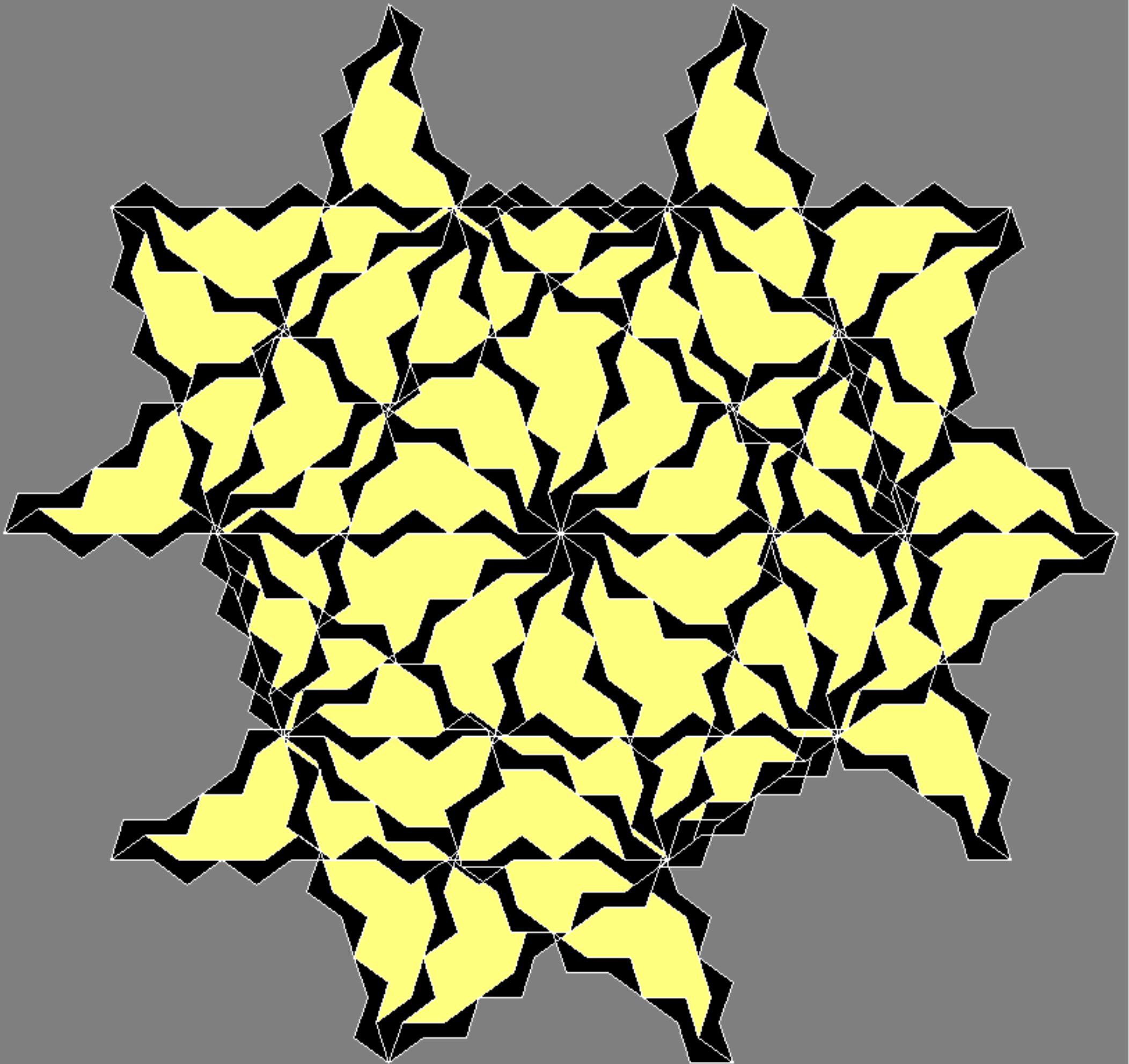


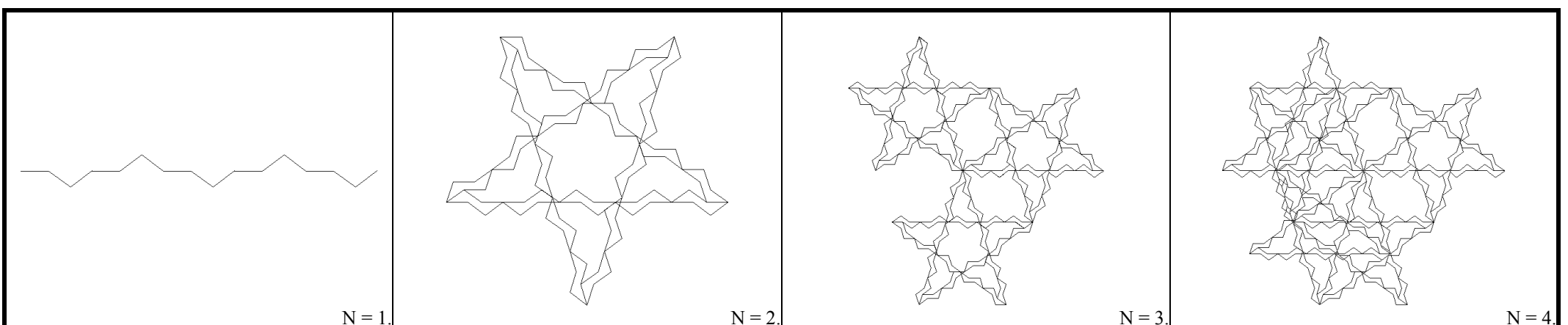
Géza Perneczky

77 GENERATED GRAPHICS

written in L-system & realized by the software Fractint 1992-1995



N = 5.

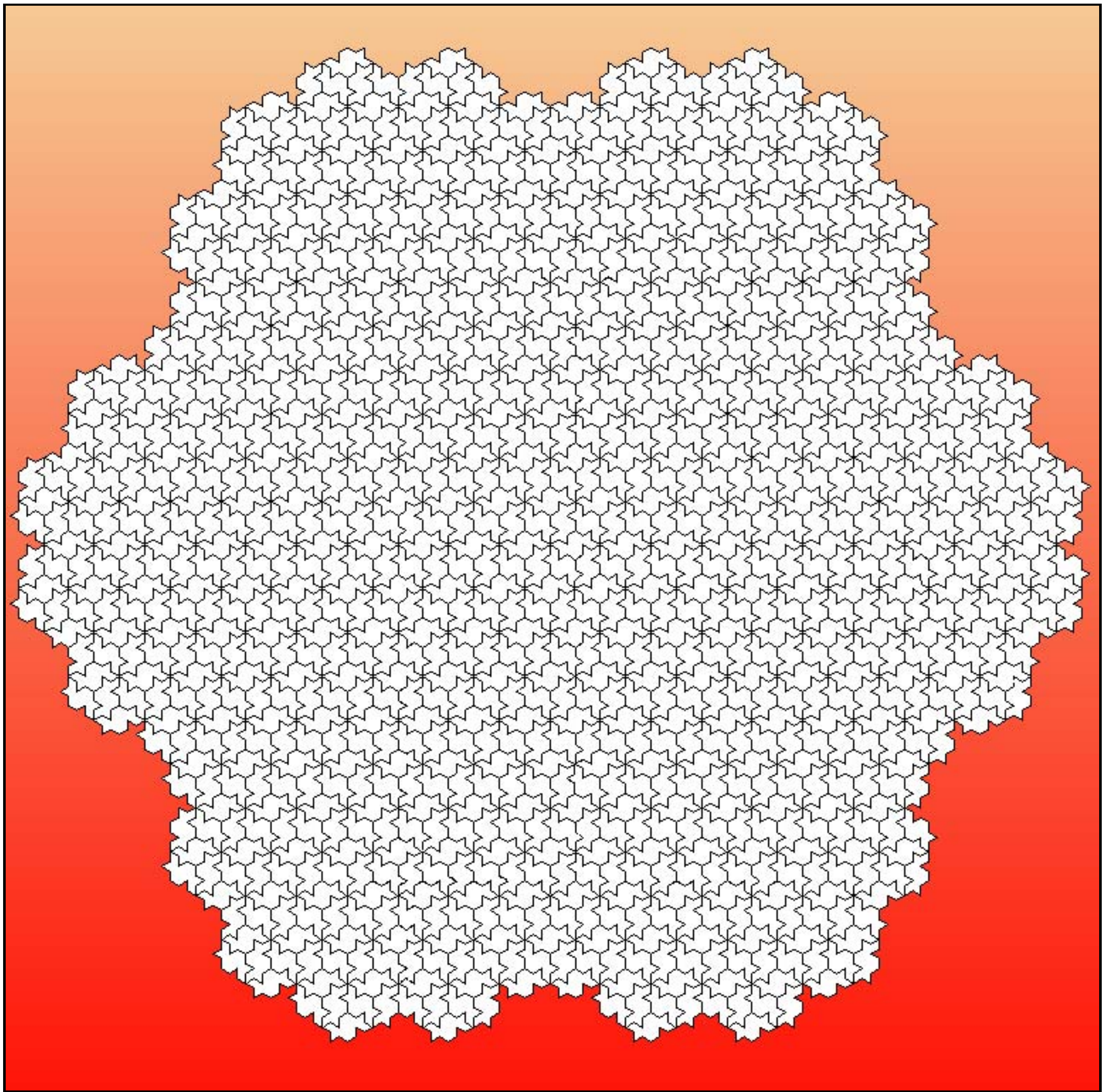


N = 1.

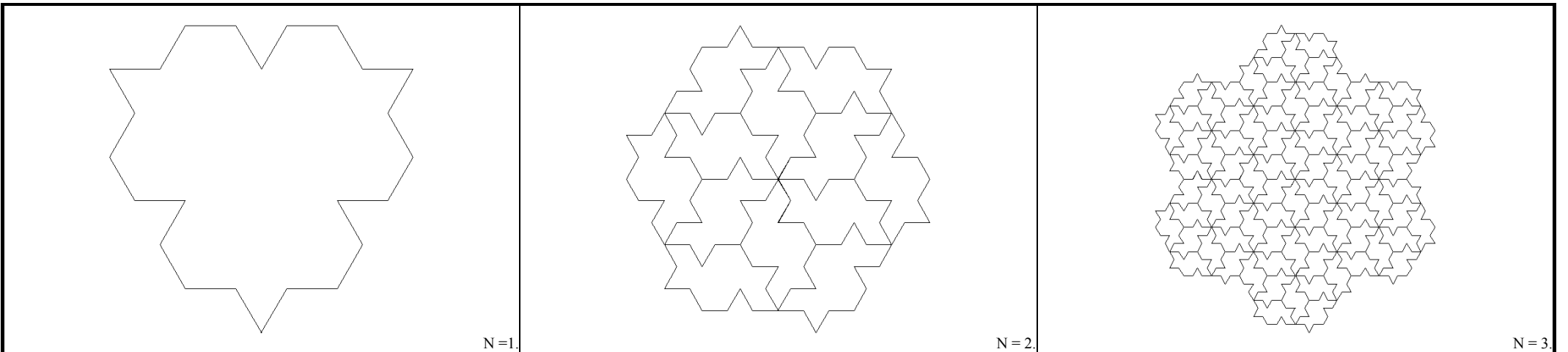
N = 2.

N = 3.

N = 4.



N=5.



N=1.

N=2.

N=3.

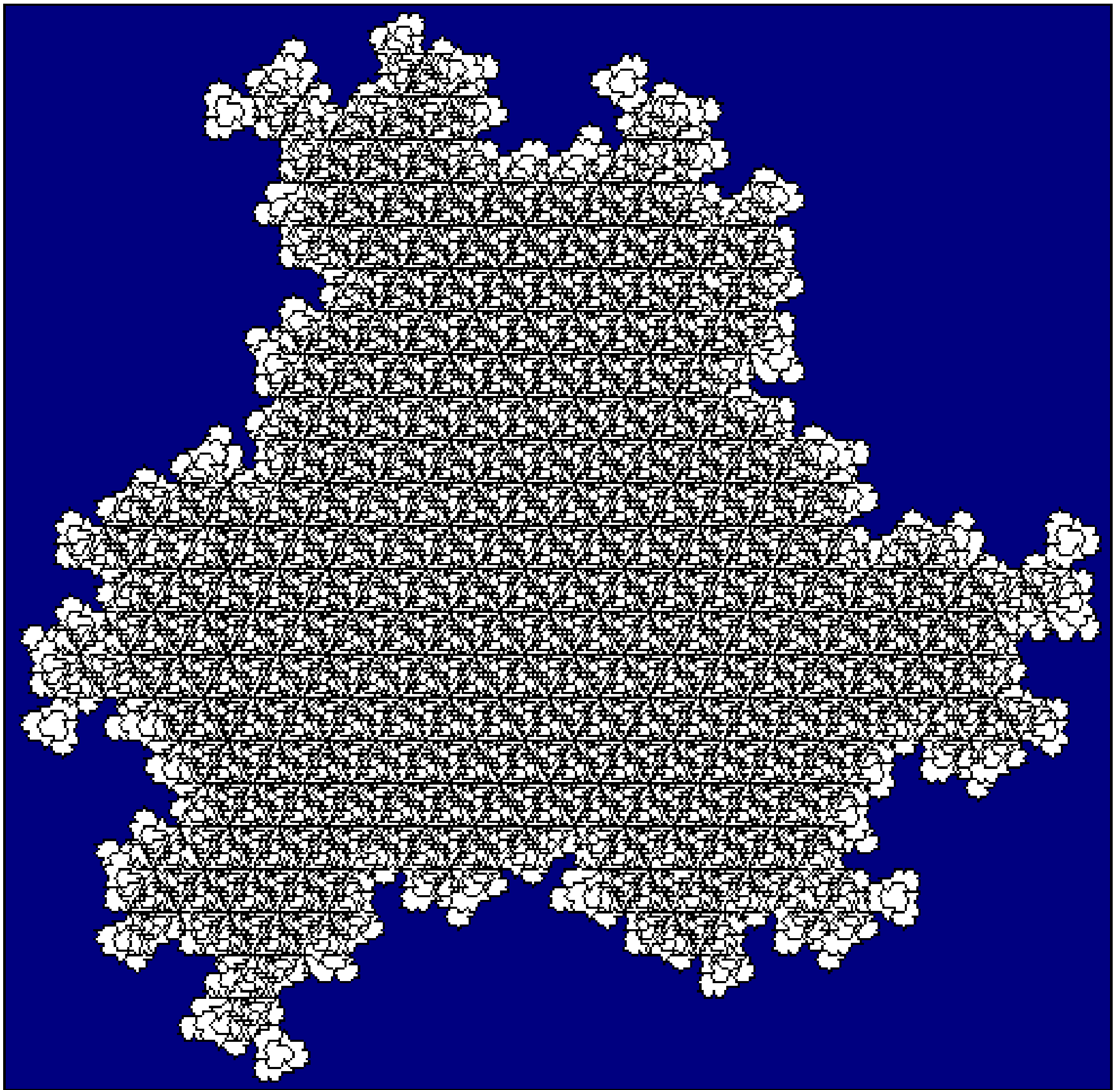
Tiling 1

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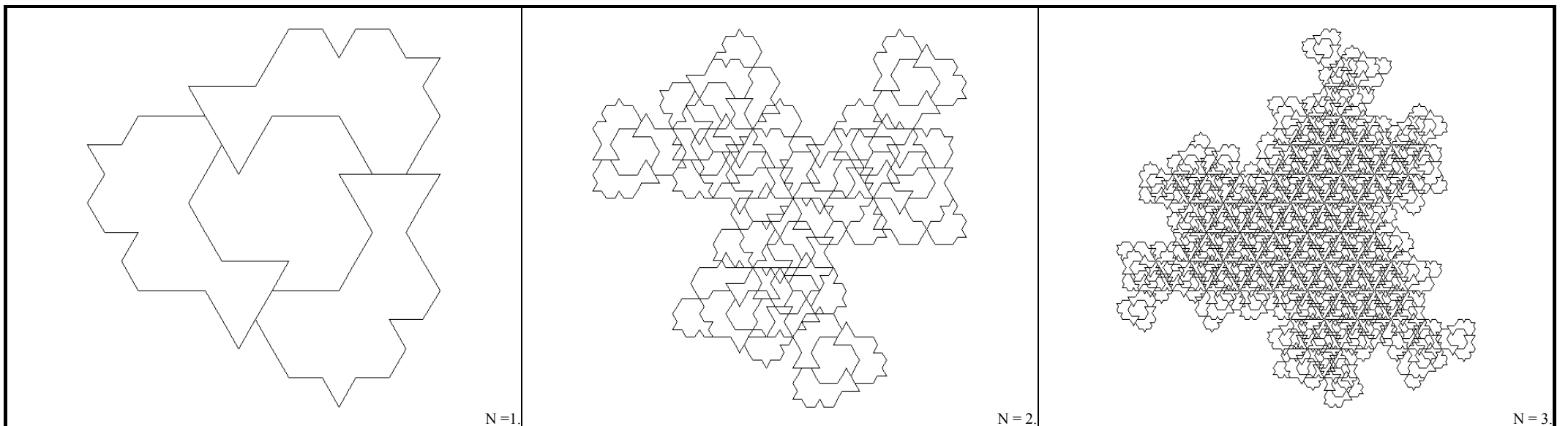
$$\delta = 60^\circ$$

$$A = F - F - F$$

$$F \rightarrow F - F ++ F - F - F + F -- F + F$$



N=4.



N=1.

N=2.

N=3.

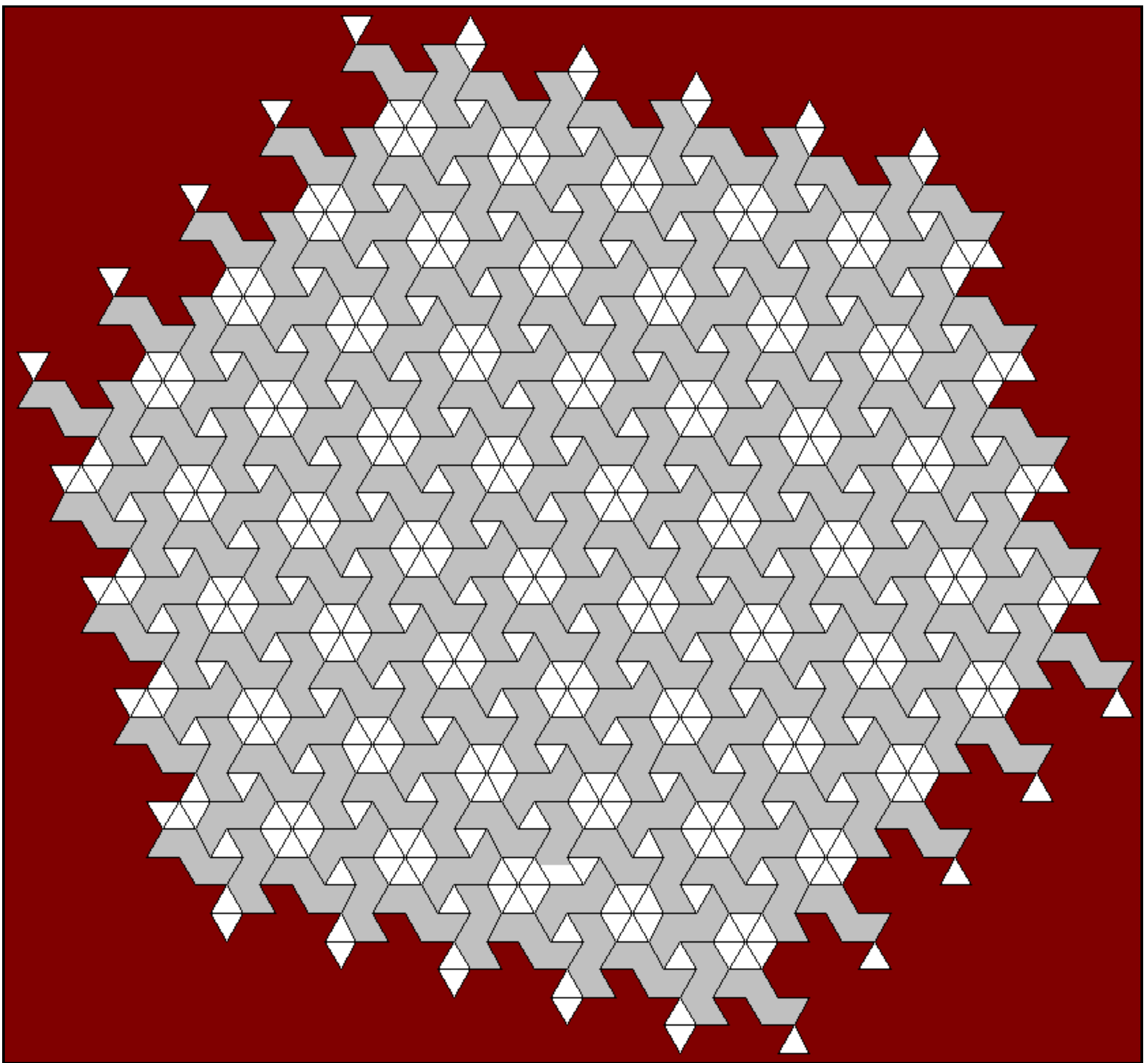
Tiling 1 - double

© G. Pernecky, 1993

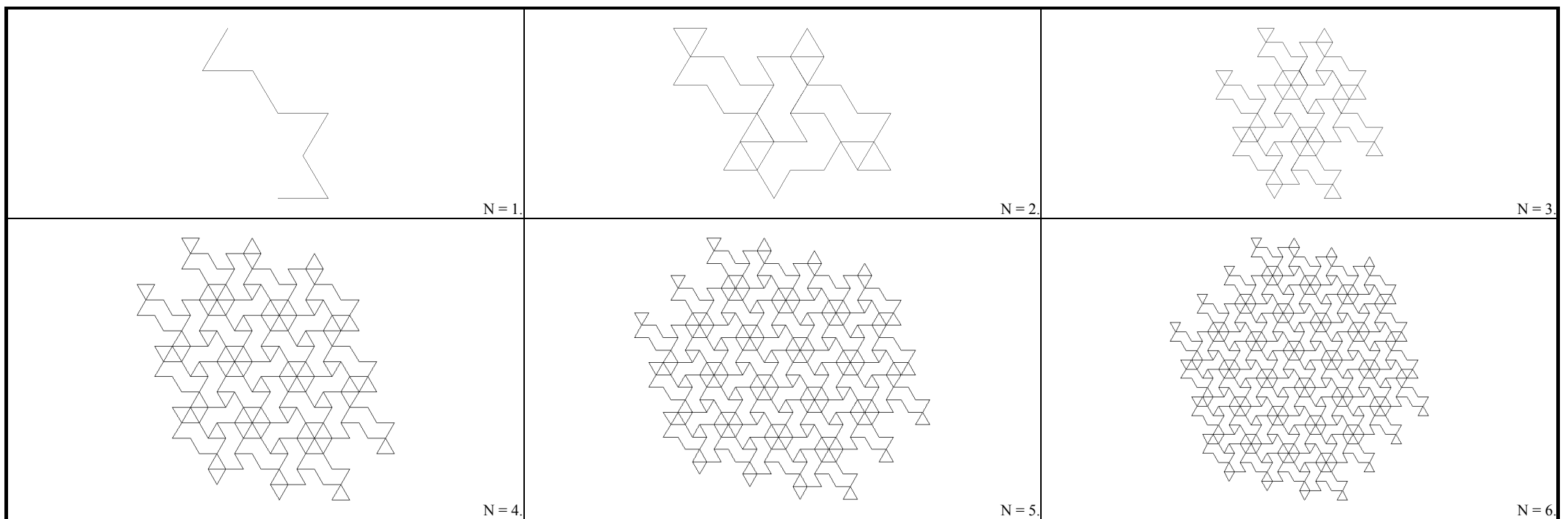
$$\delta = 60^\circ$$

$$A = F - F - F$$

$$F \rightarrow F - F ++ F - F - F + F - - F + F - FF - FF ++ FF - FF - FF + FF$$



N = 8.



Tiling 4

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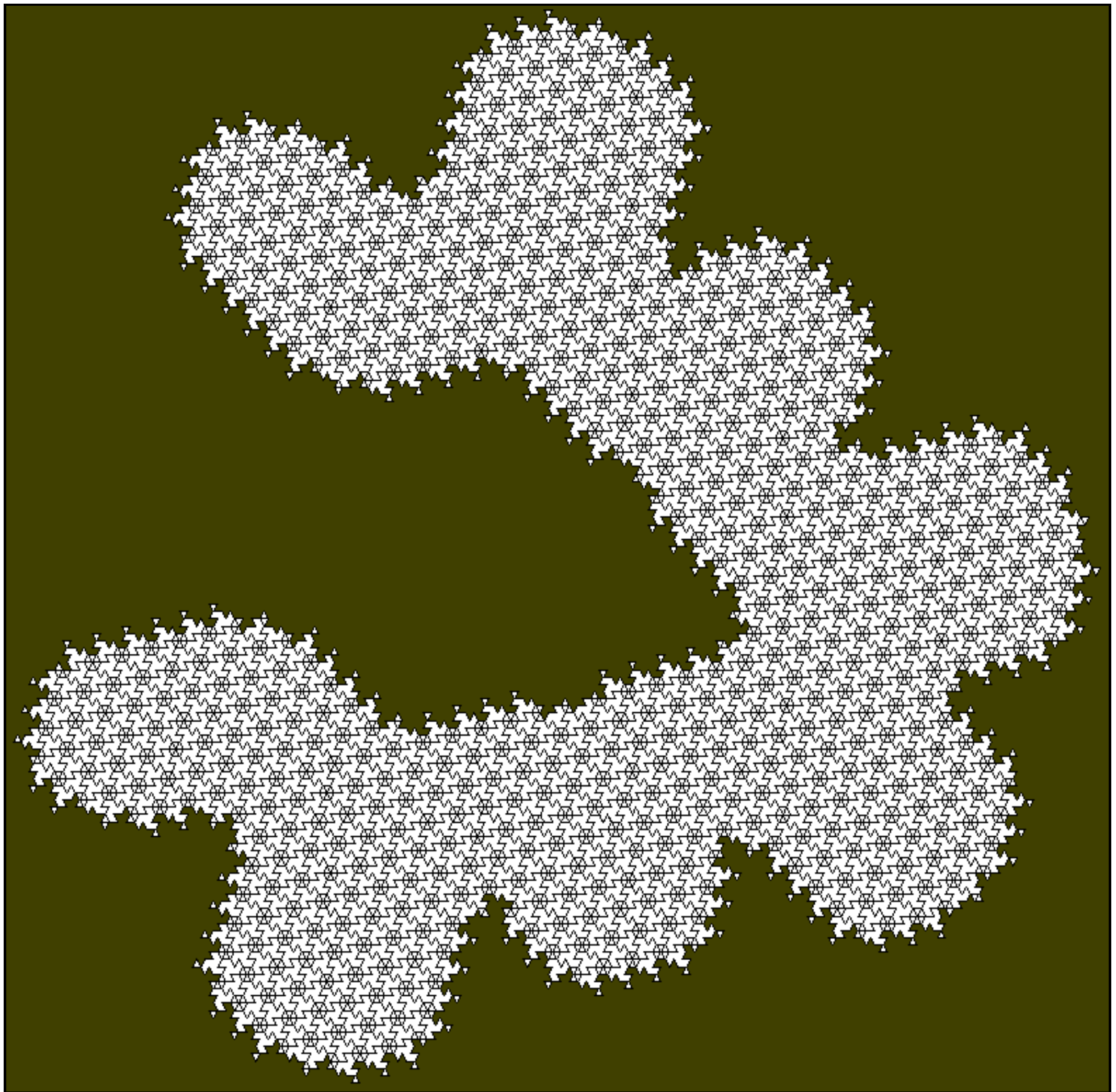
$\delta = 60^\circ$

A = F

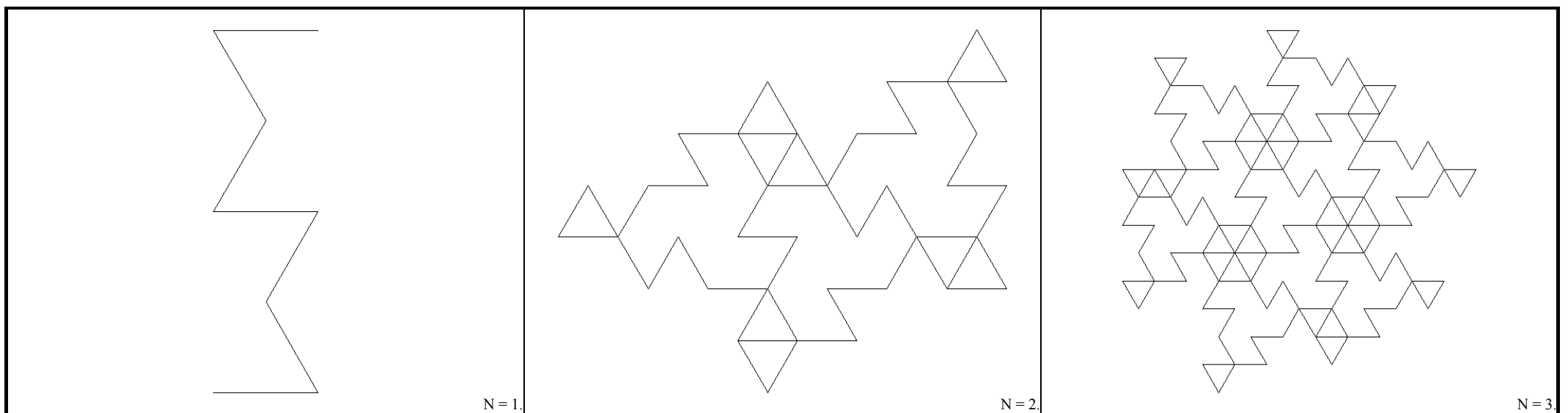
F \rightarrow F ++ FX - F ++ FX - F + FXX -- FY

X \rightarrow ++

Y \rightarrow +++



N=7.



N=1.

N=2.

N=3.

Tiling 5

© G. Pernecky, 1993

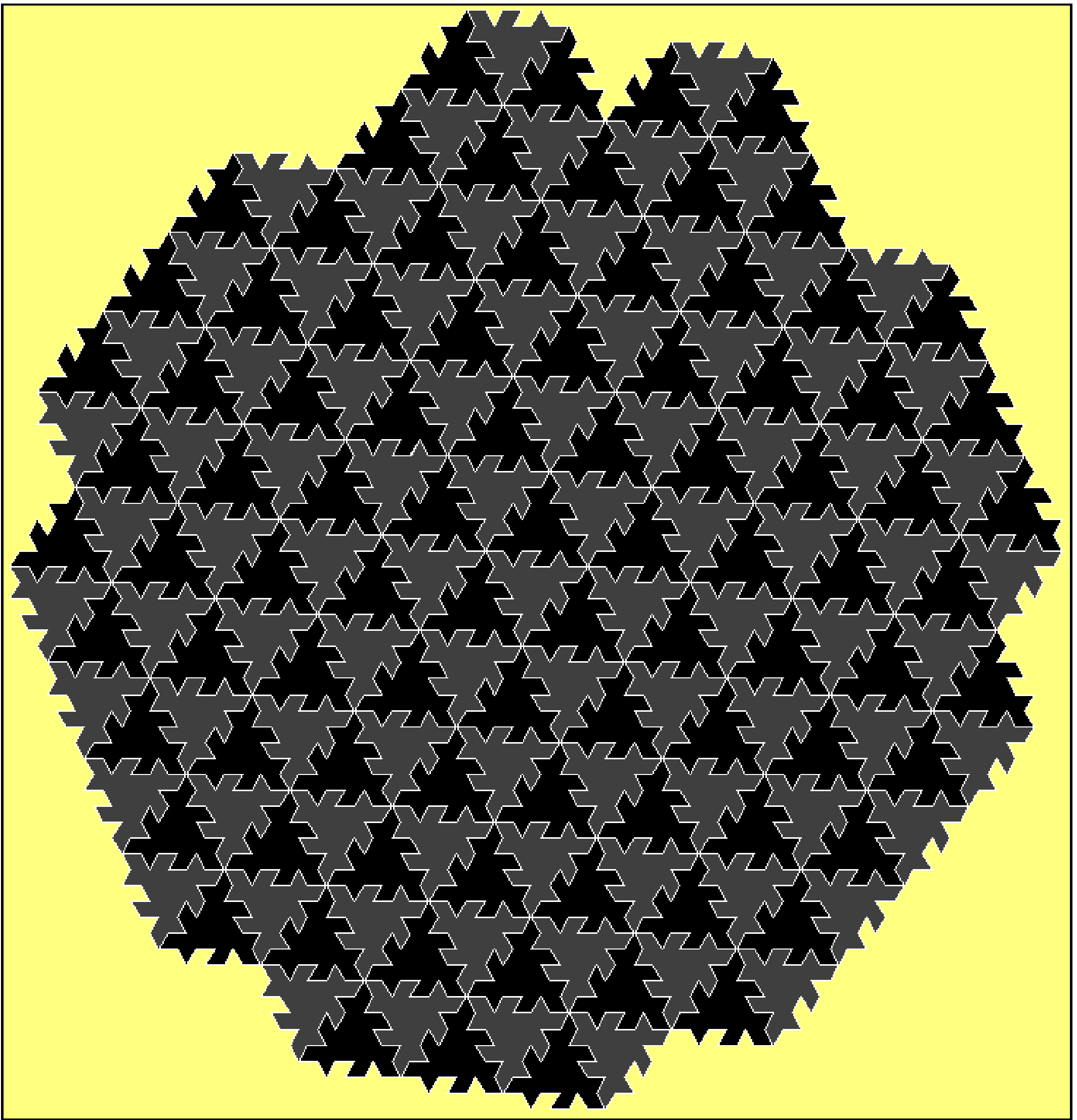
$$\delta = 60^\circ$$

$$A = F$$

$$F \rightarrow F ++ FX - F ++ FX -- F + FXX -- FY$$

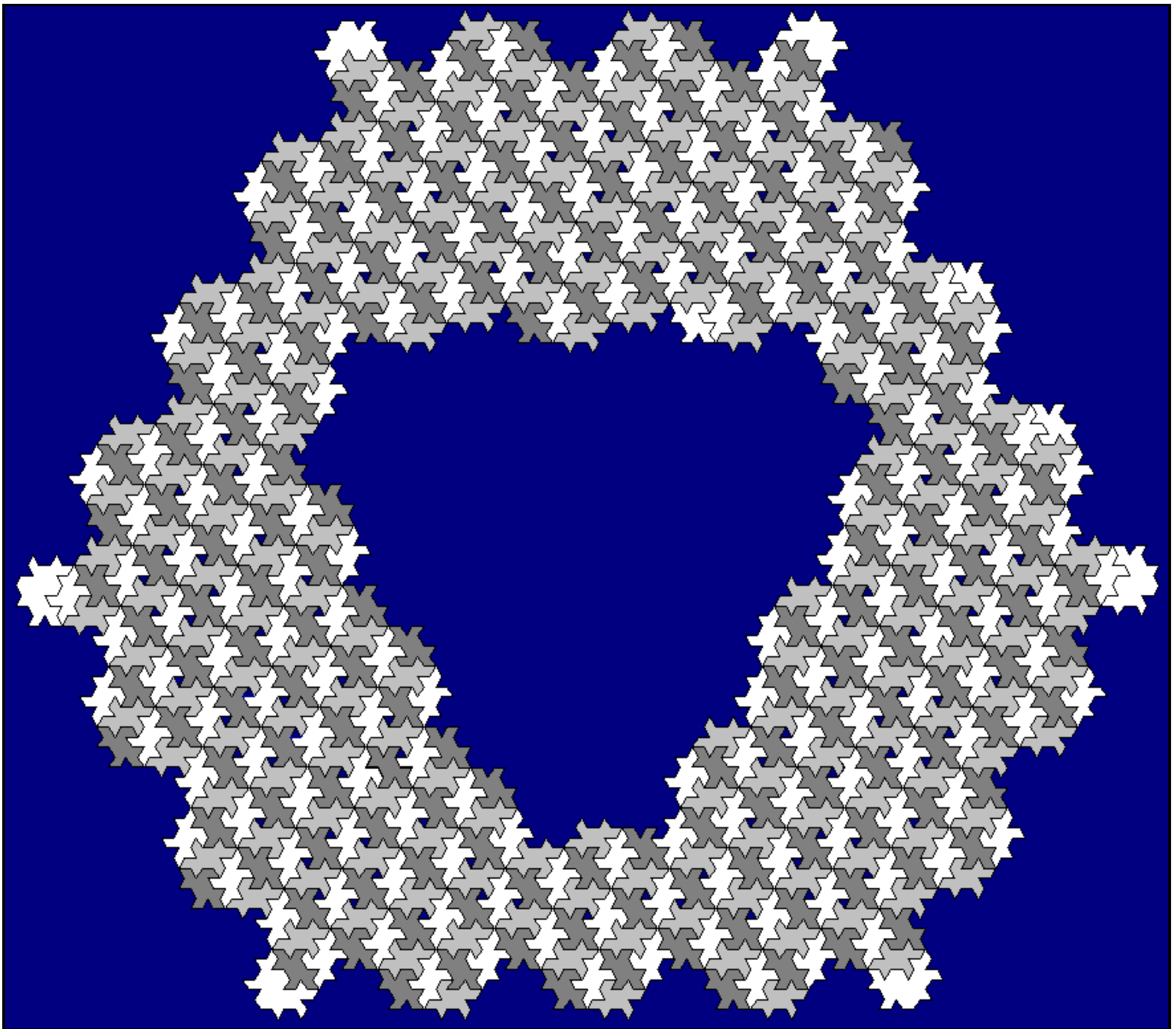
$$X \rightarrow ++$$

$$Y \rightarrow +++$$

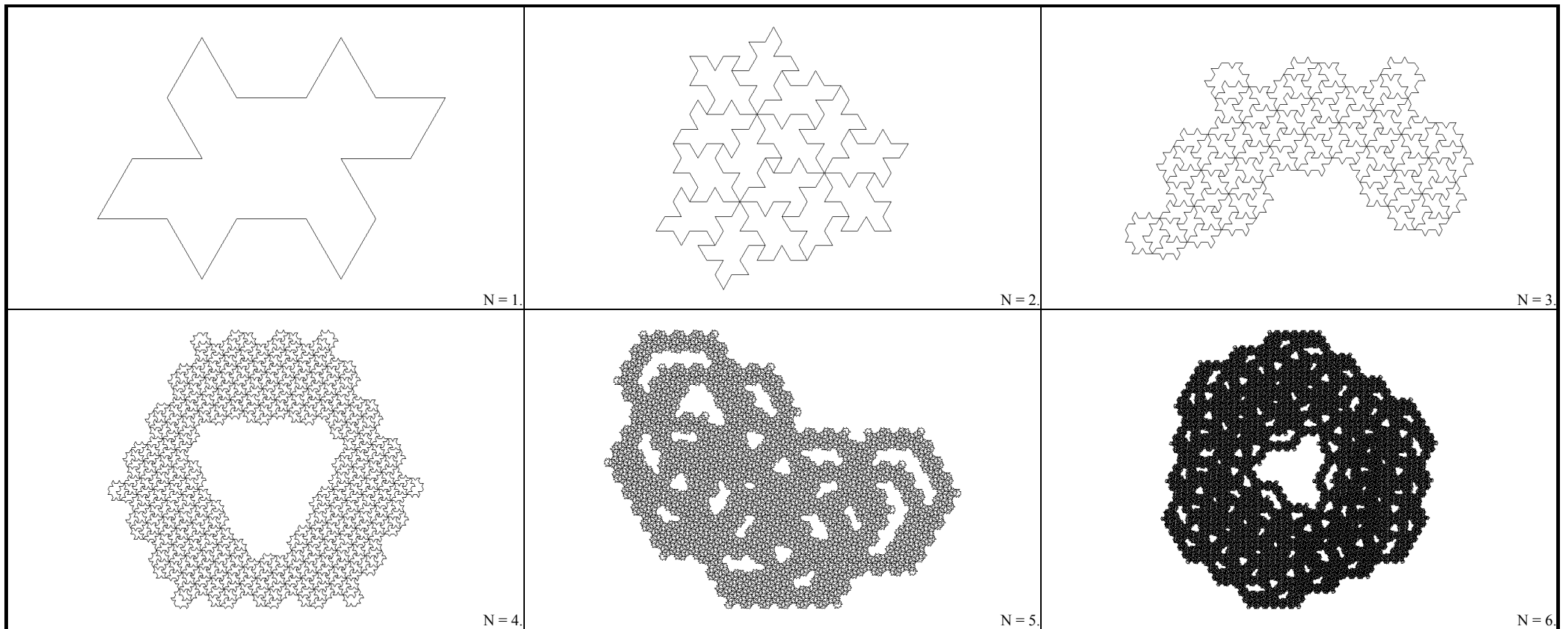


N = 5.

<p>N = 1.</p>	<p>N = 2.</p>	<p>N = 3.</p>
<p>N = 4.</p>	<p style="text-align: center;">Tiling 6 © G. Pernecky, 1993</p> <p>$\delta = 60^\circ$ $A = F$ $F \rightarrow FX-F ++ FX- FXX--F++F + FXX--F + FY$ $X \rightarrow ++$ $Y \rightarrow --$</p>	<p>N = 6.</p>



N = 4.



Tiling 7

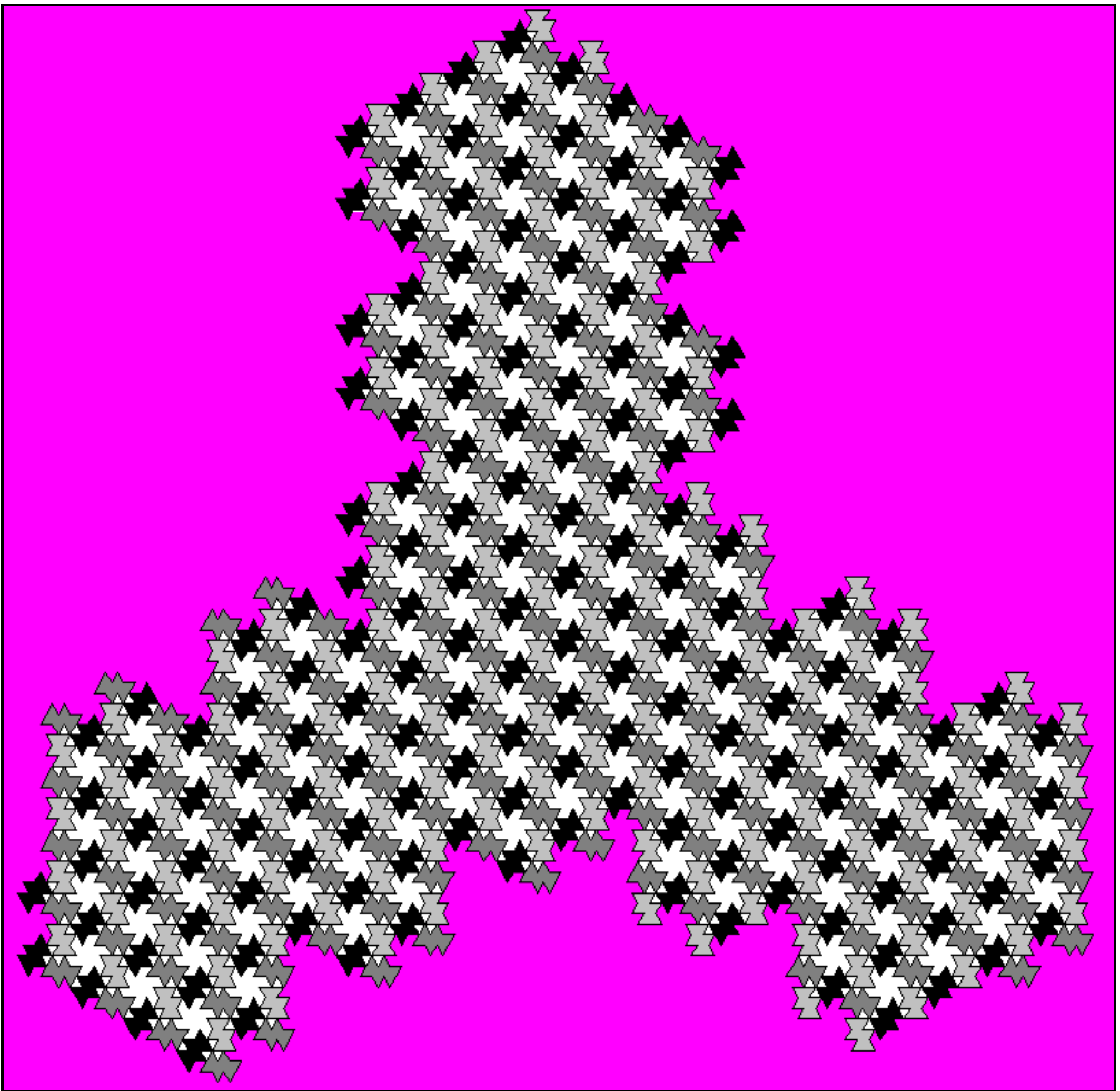
$\delta = 60^\circ$

A = F

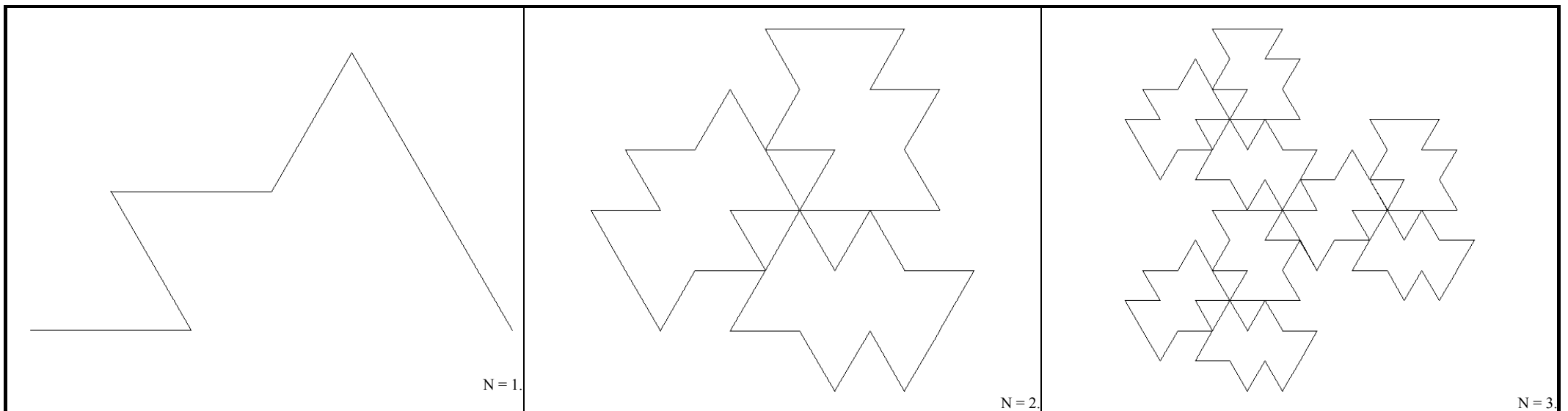
F \rightarrow FX - F ++ FX - FX - F ++ F + FXX -- F + F

X \rightarrow ++

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N = 6.



N = 1.

N = 2.

N = 3.

Tiling 8

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$$\delta = 60^\circ$$

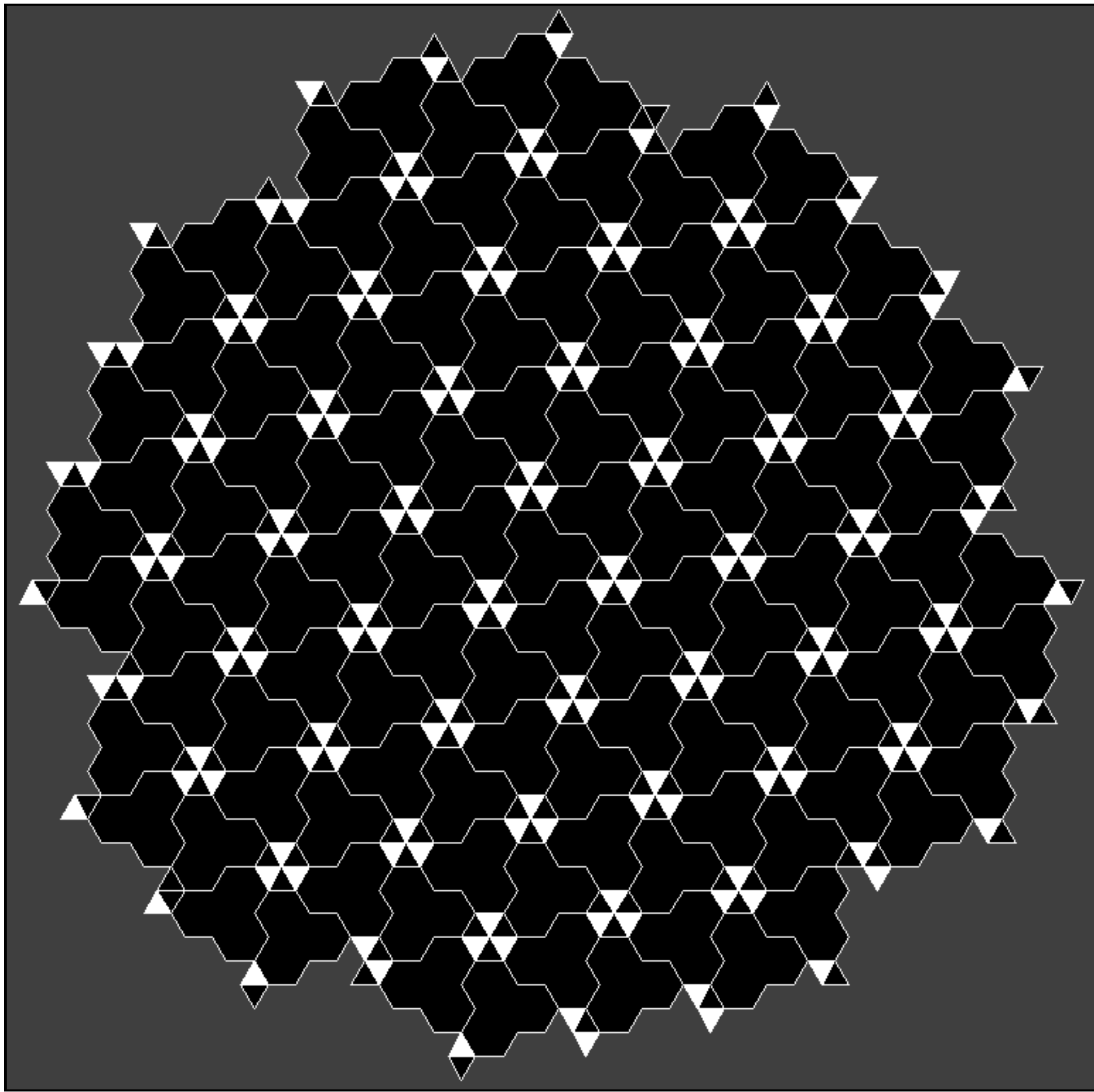
$$A = F$$

$$F \rightarrow FXX ++ F -- FX+F -- FFY$$

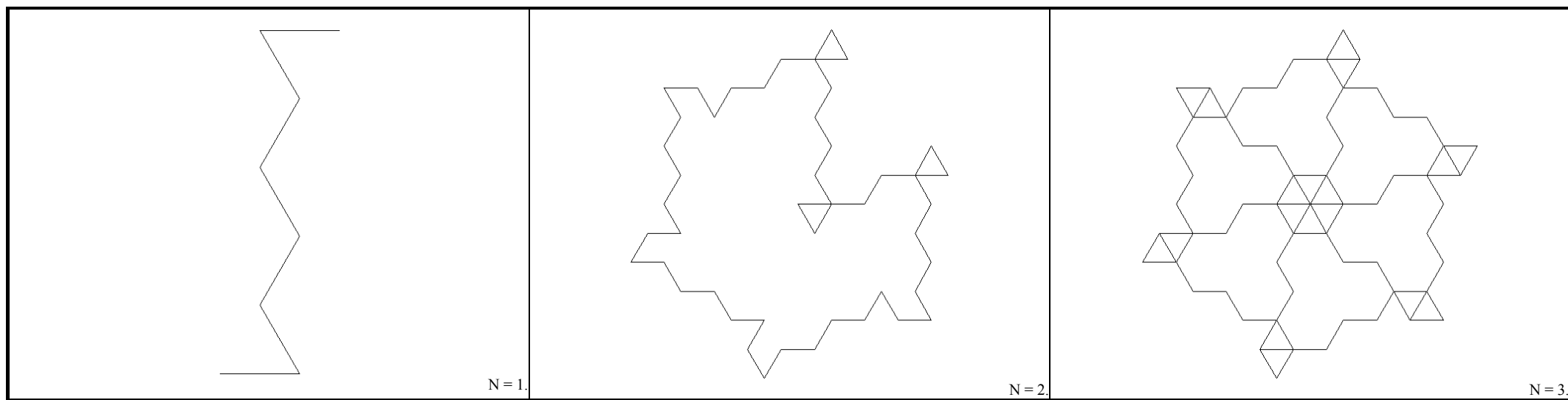
$$Z \rightarrow FXX ++ F -- FX+F -- FFY$$

$$X \rightarrow -$$

$$Y \rightarrow Z$$



N = 6.



N = 1.

N = 2.

N = 3.

Tiling 9

© G. Pernecky, 1993

$$\delta = 60^\circ$$

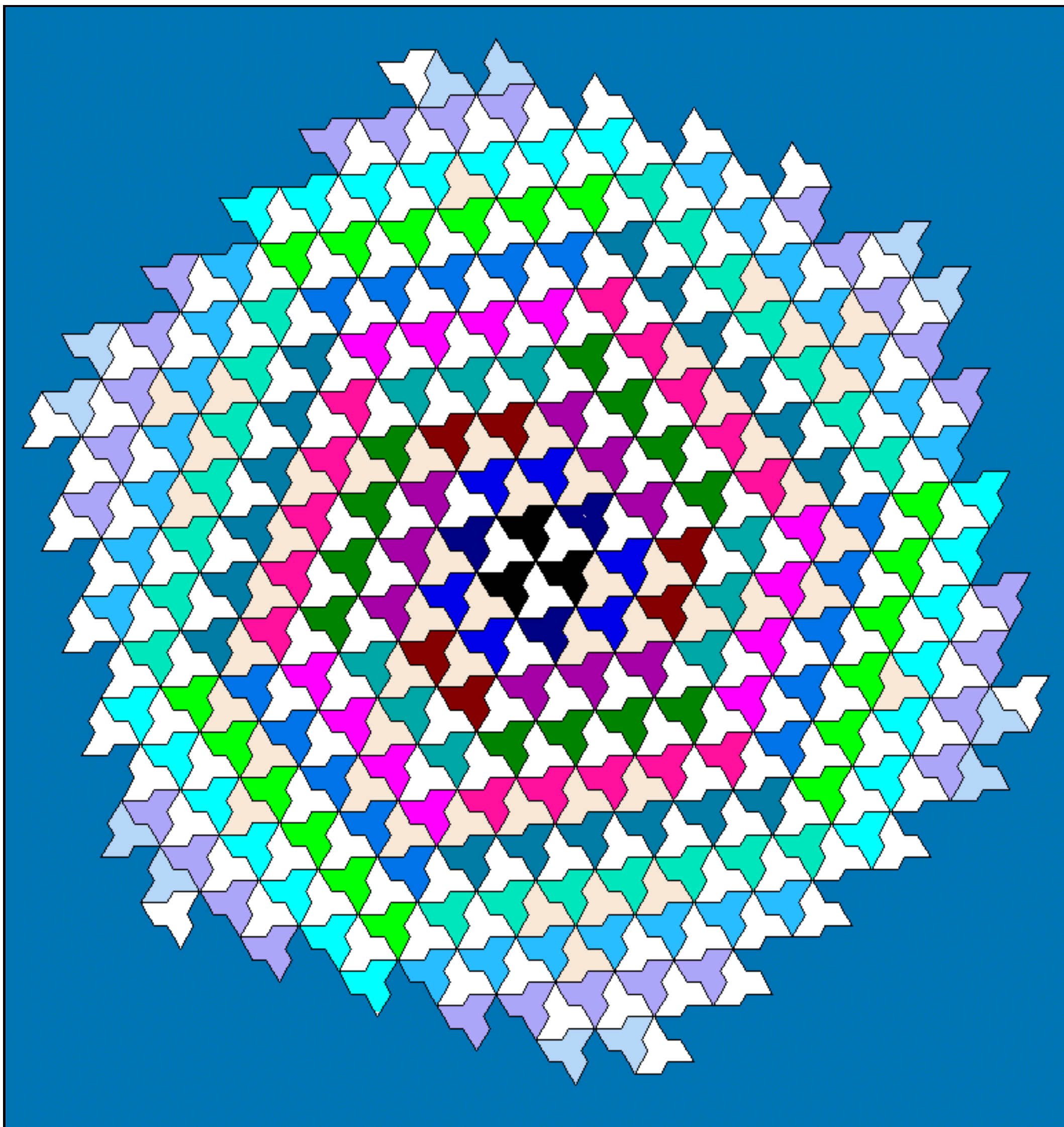
$$A = F$$

$$F \rightarrow FXX ++ F -- FX+F -- FFY$$

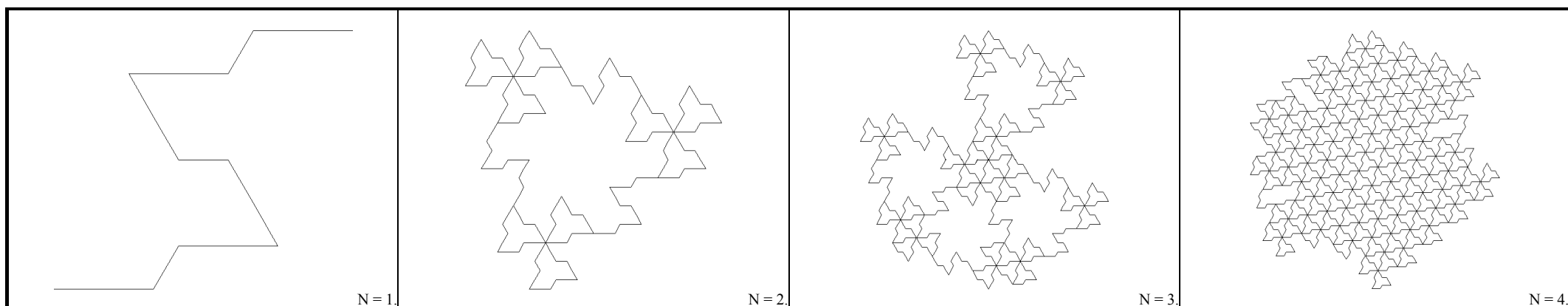
$$Z \rightarrow FXX ++ F -- FX+F -- FFY$$

$$X \rightarrow ++$$

$$Y \rightarrow Z$$



N = 6.



N = 1.

N = 2.

N = 3.

N = 4.

Tiling 12

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$$\delta = 60^\circ$$

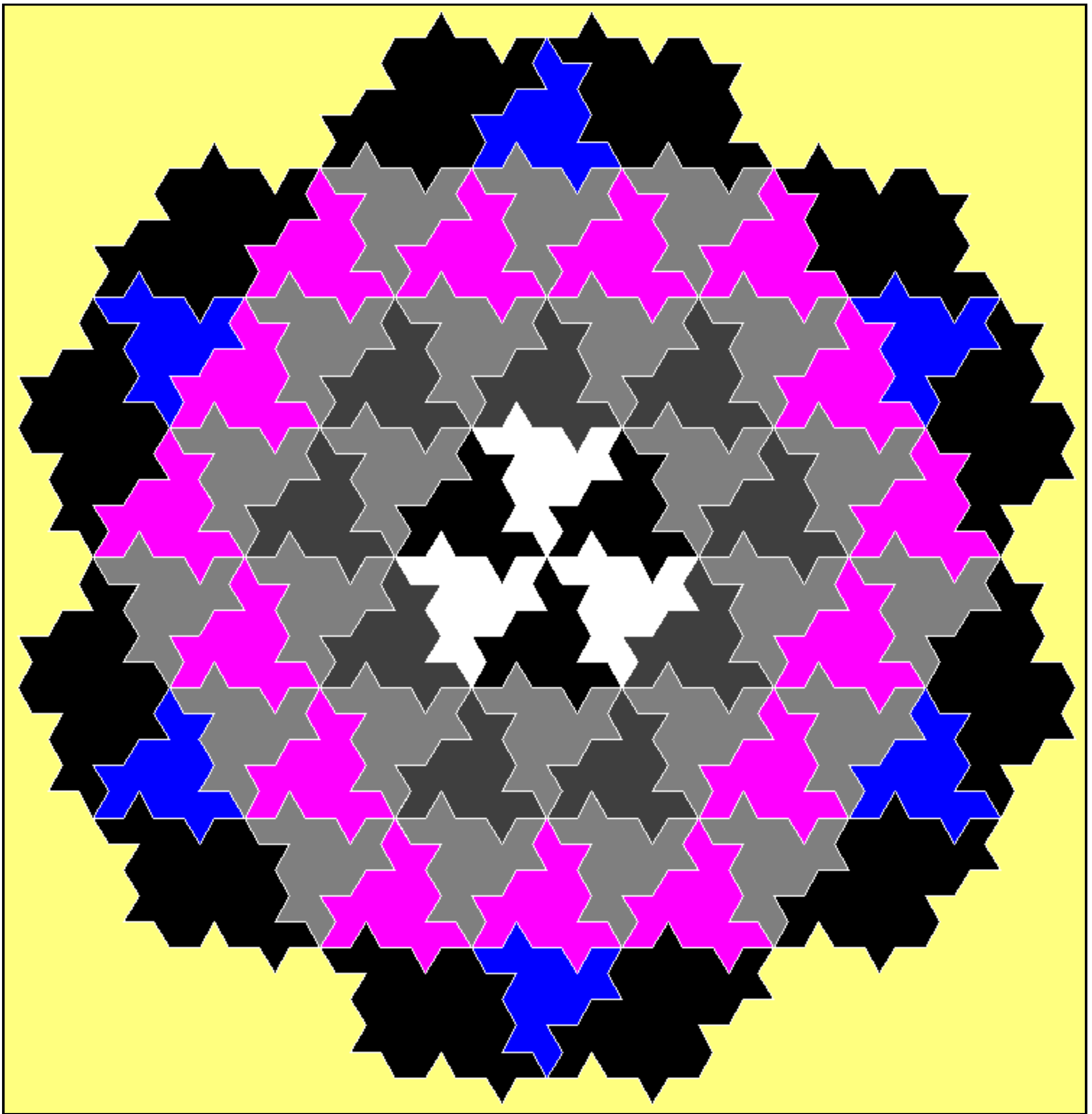
$$A = F$$

$$F \rightarrow FF + FX - FF ++ FF + FX - FFXX - - FF + FX - FFY$$

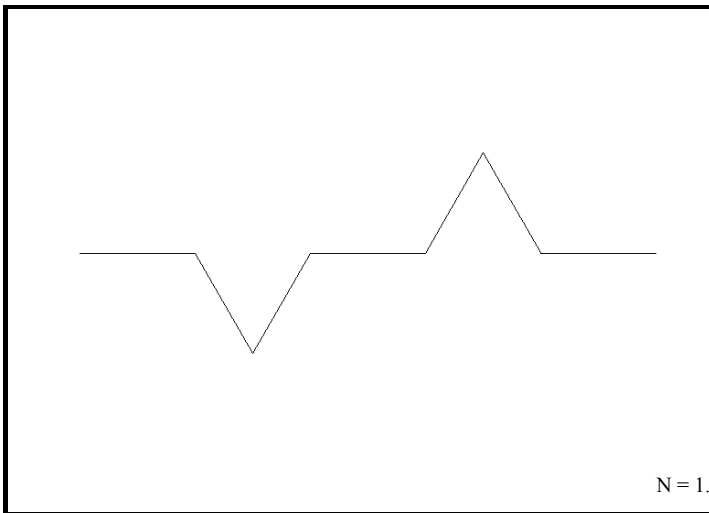
$$Z \rightarrow FF + FX - FFXX - - FF + FX - FF ++ FF + FX - FFY$$

$$Y \rightarrow Z$$

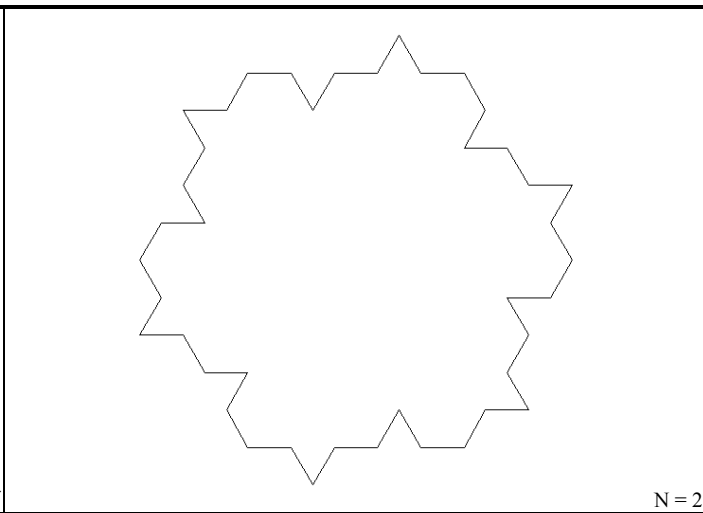
$$X \rightarrow ++$$



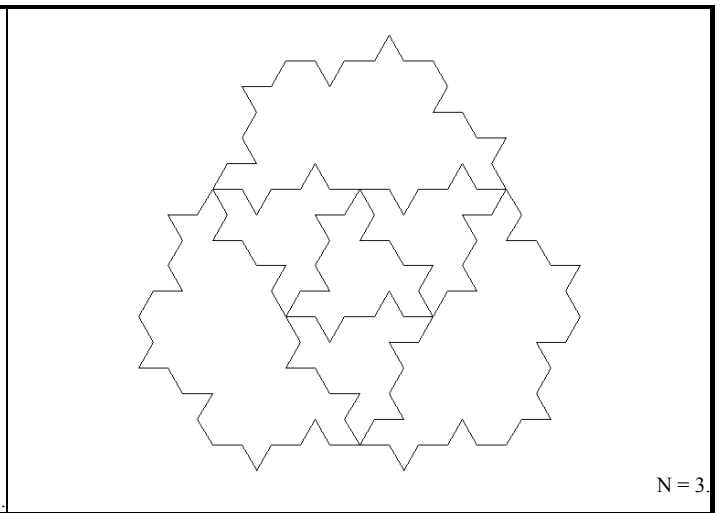
N=6.



N=1.



N=2.



N=3.

Tiling 13

© G. Pernecky, 1993

$$\delta = 60^\circ$$

$$A = F$$

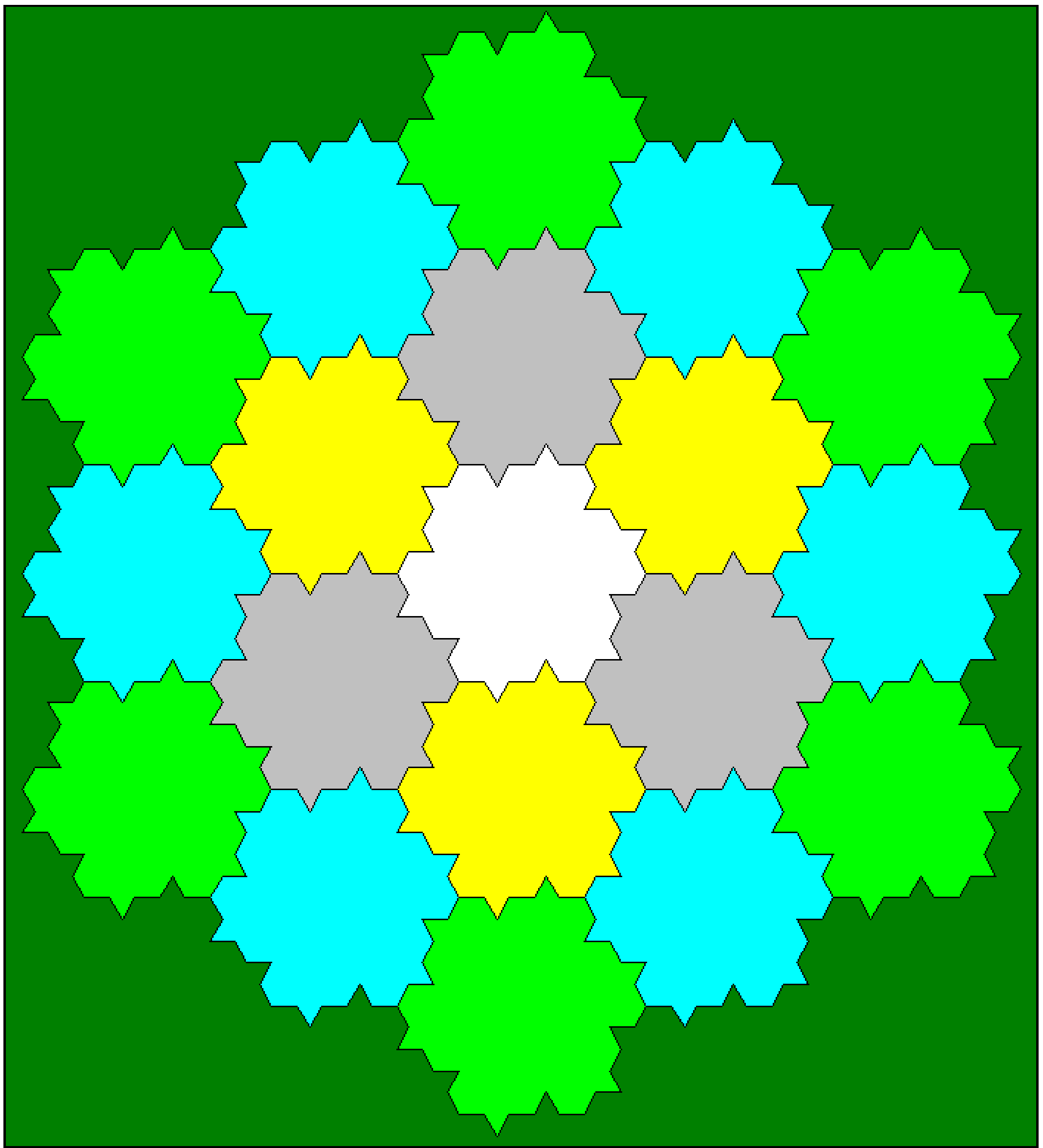
$$F \rightarrow F X K - F V K + + F X K - F K + F X X V K - - F K + F K$$

$$X \rightarrow + +$$

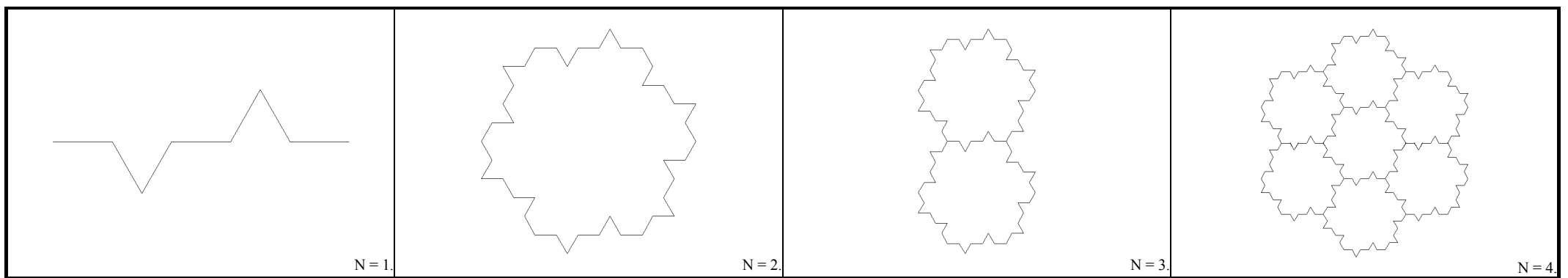
$$V \rightarrow -$$

$$K \rightarrow L$$

$$L \rightarrow +$$



N=5.



N=1.

N=2.

N=3.

N=4.

Tiling 14

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$\delta = 60^\circ$

A = F

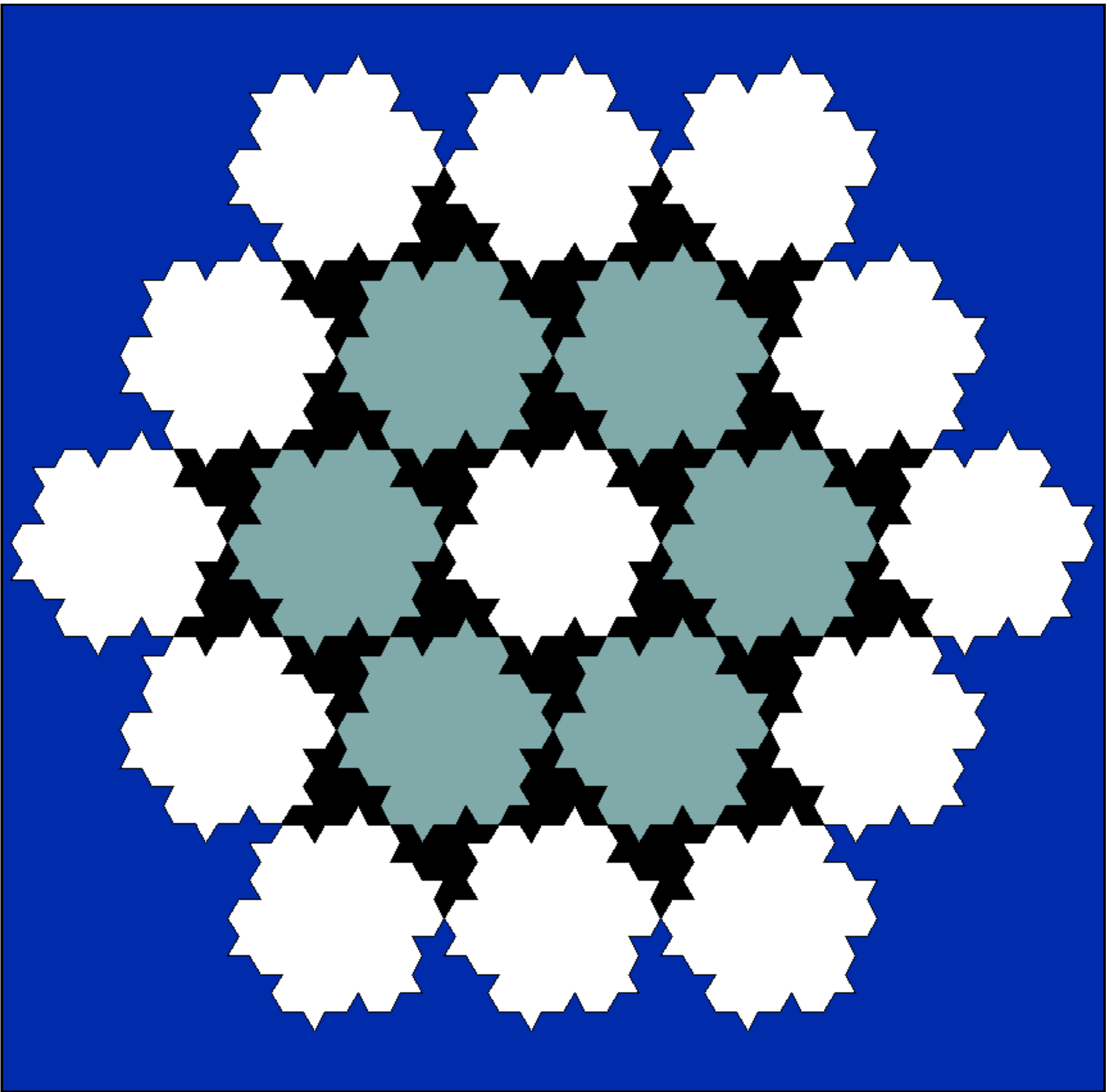
F \rightarrow FXK - FVK ++ FXK - FK + FXXVK -- FK + FK

X \rightarrow ++

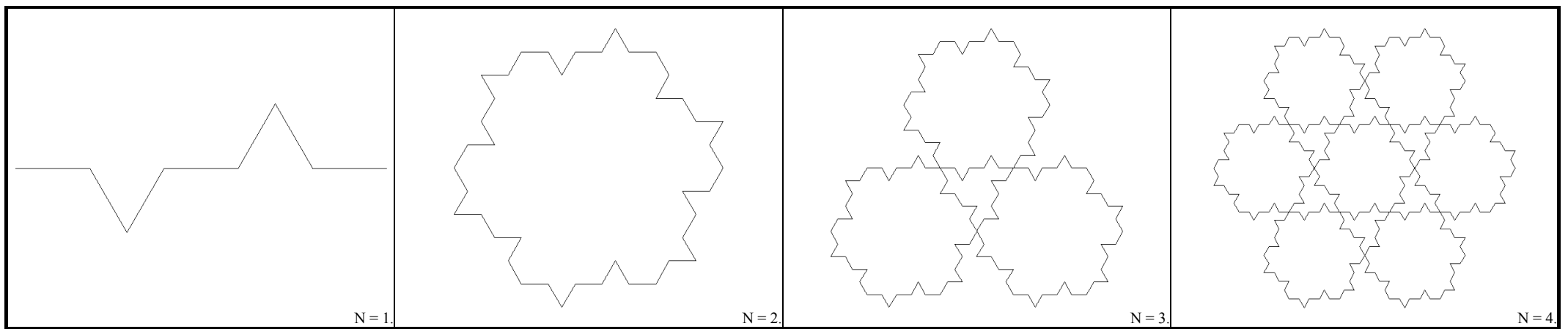
V \rightarrow -

K \rightarrow L

L \rightarrow ++



N=6.



N=1.

N=2.

N=3.

N=4.

Tiling 15

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$$\delta = 60^\circ$$

$$A = F$$

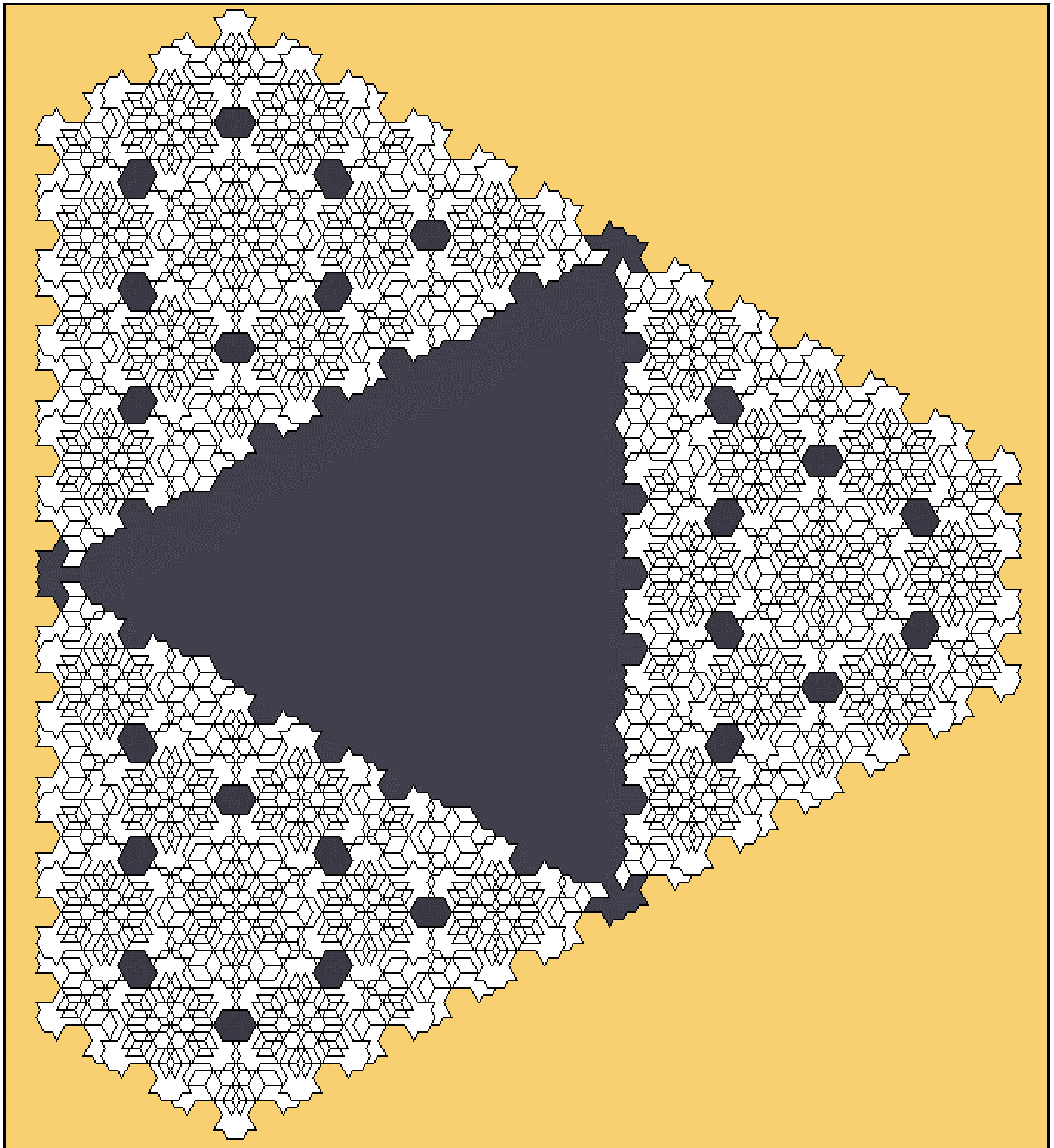
$$F \rightarrow FXK - FVK ++ FXX - FK + FXXVK -- FK + FK$$

$$X \rightarrow ++$$

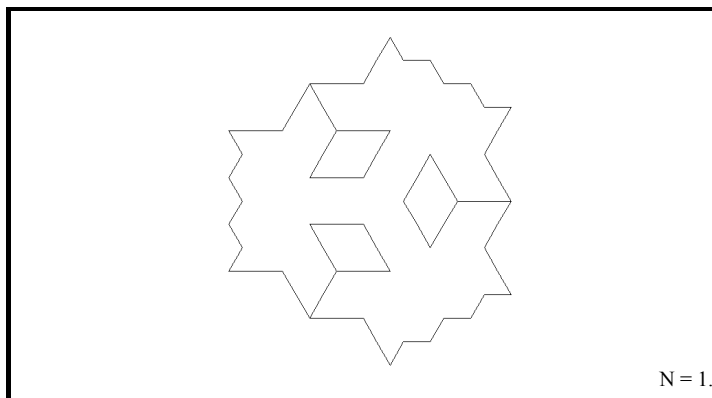
$$V \rightarrow -$$

$$K \rightarrow L$$

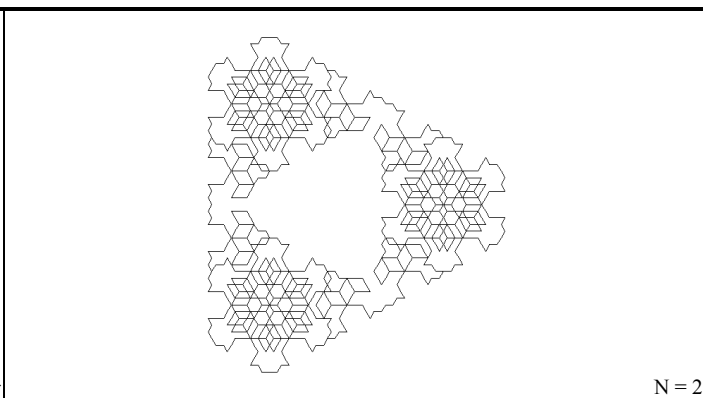
$$L \rightarrow +++$$



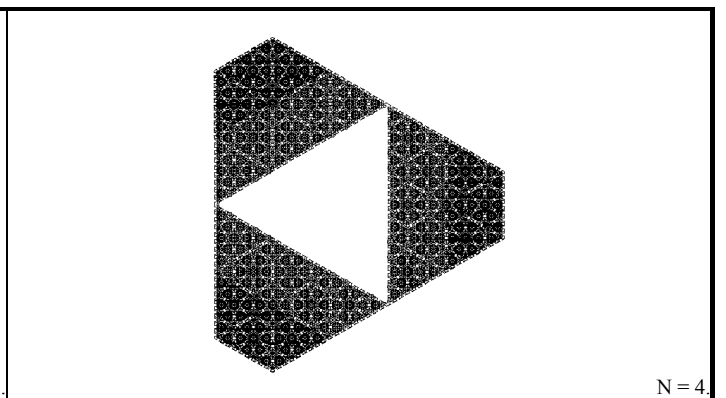
N=3.



N=1.



N=2.



N=4.

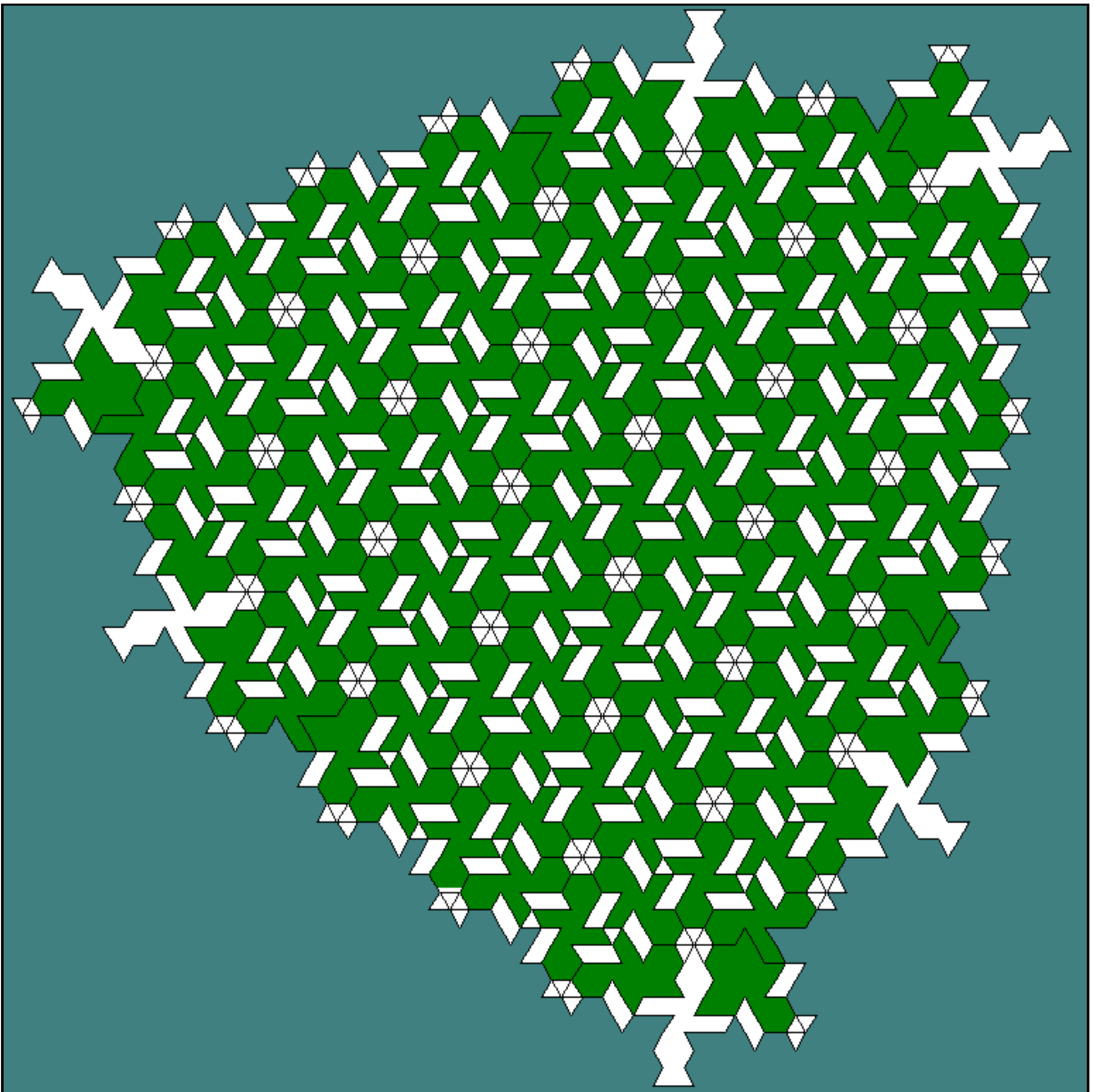
CLOTH

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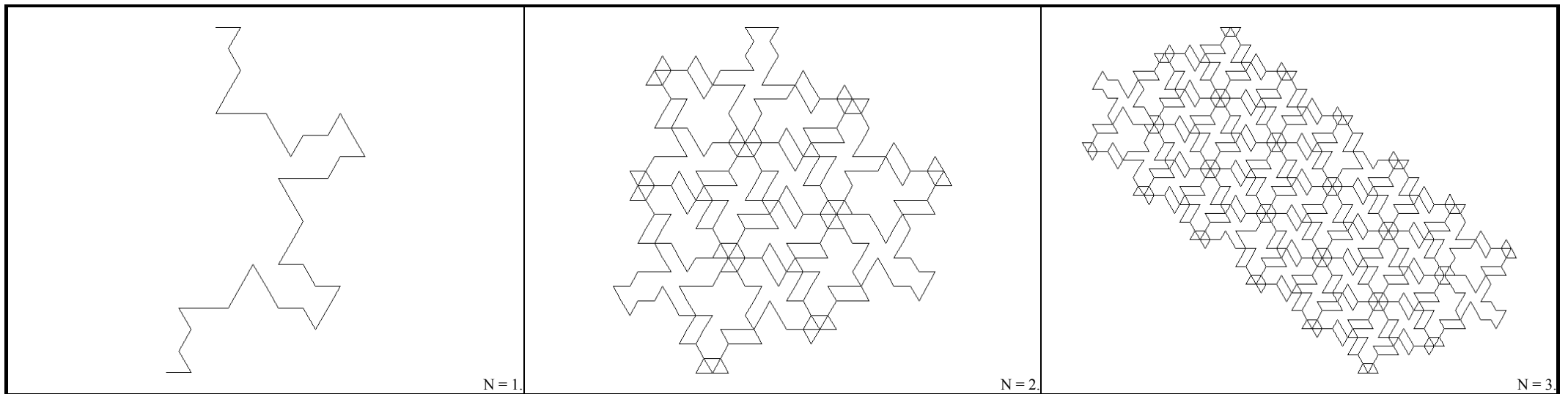
$$\delta = 60^\circ$$

$$A = F + F + F$$

$$F \rightarrow F - F + F \quad - - \quad FF + FF \quad - - \quad FF + FF \quad - - \quad FF - FF \quad - - \quad FF + FF \quad - - \quad FF + FF \quad - - \quad F + F - F$$



N=4.



N=1.

N=2.

N=3.

MILL (PADLE)

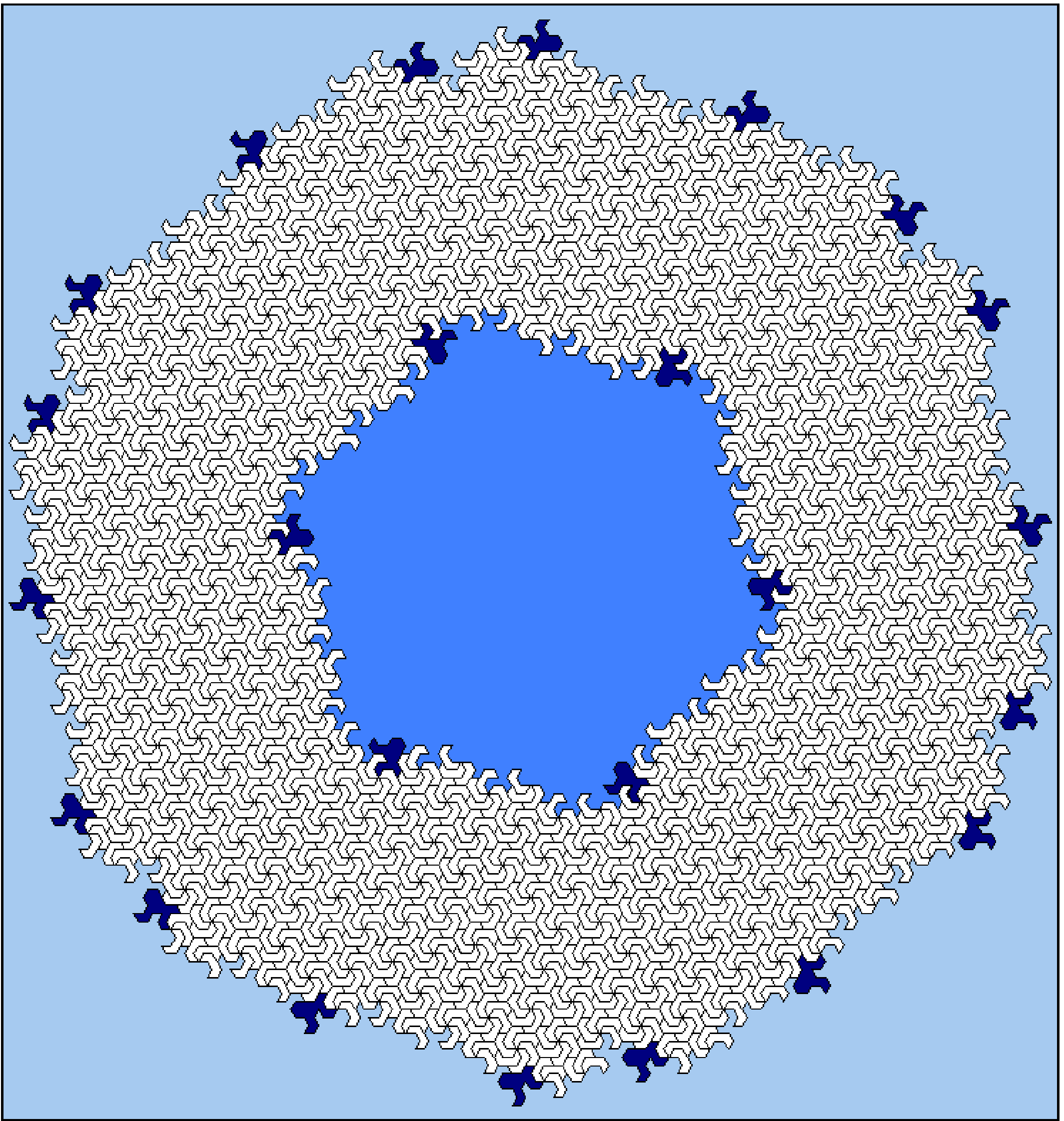
© G. Pernecky, 1992

$\delta = 60^\circ$

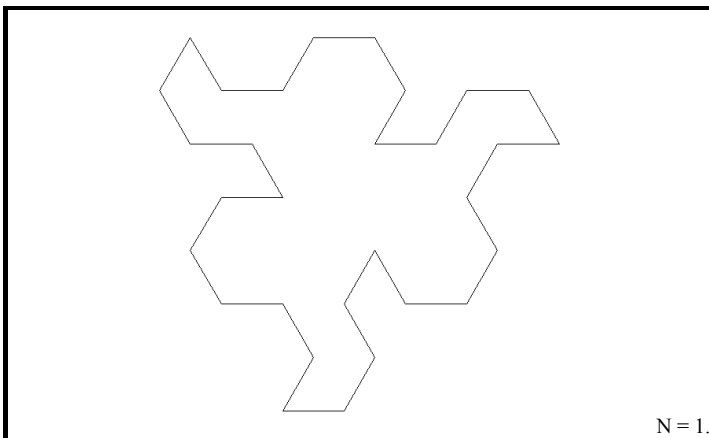
A = F F F

F \rightarrow F + + FX - F + FXX - - FF + FFXX - - FF + FX - F + + F

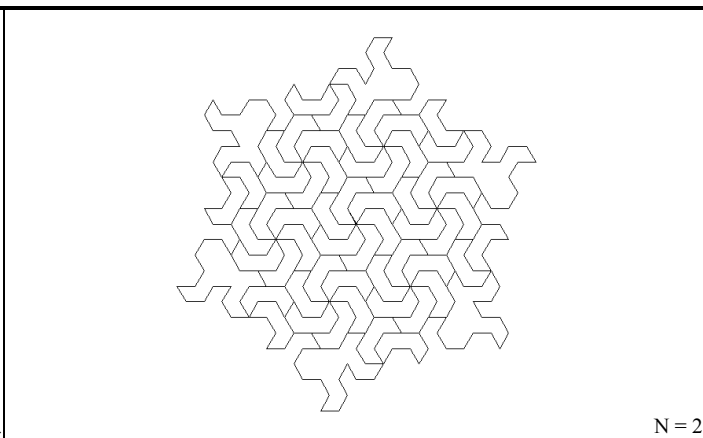
X \rightarrow +



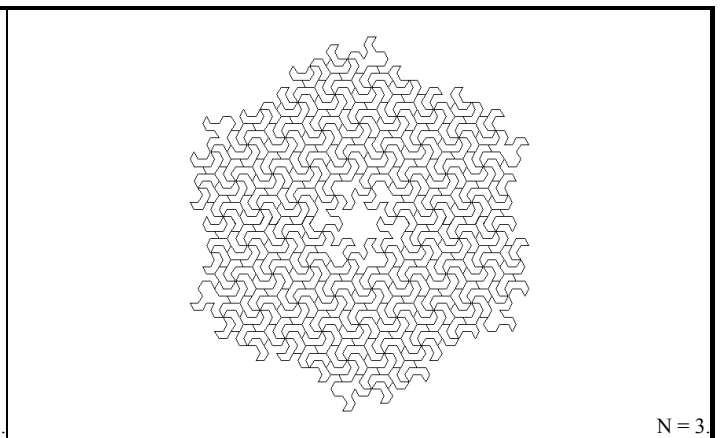
N=4.



N=1



N=2



N=3

AB - 6X (Swan sea)

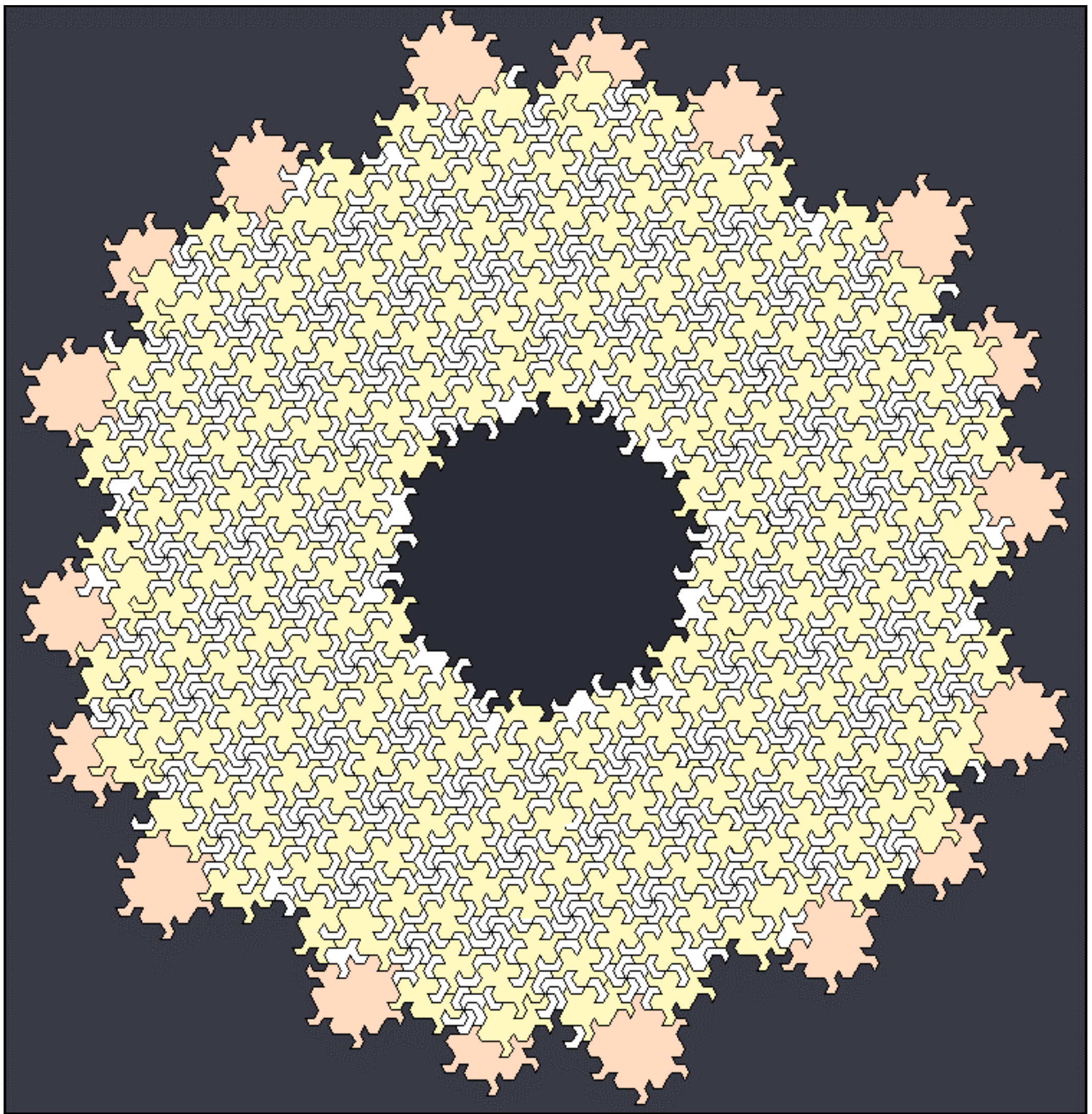
© G. Pernecky, 1993

$\delta = 60^\circ$

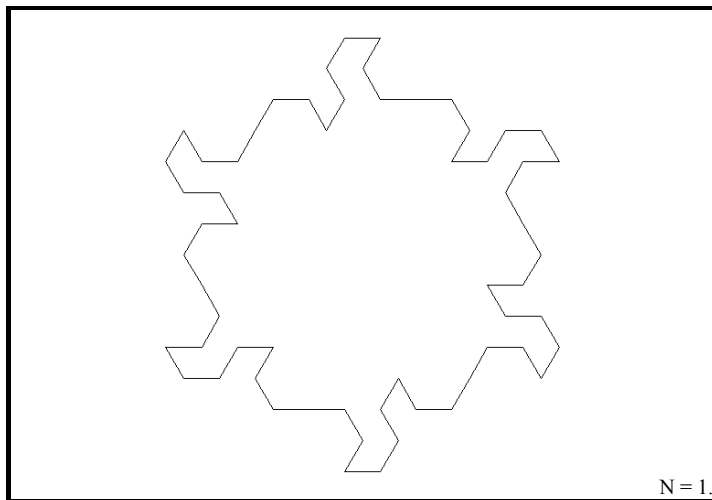
A = F - F - F - F - F - F

F \rightarrow F - F - F ++ KKF + KF - F - F -- F + KF + KF

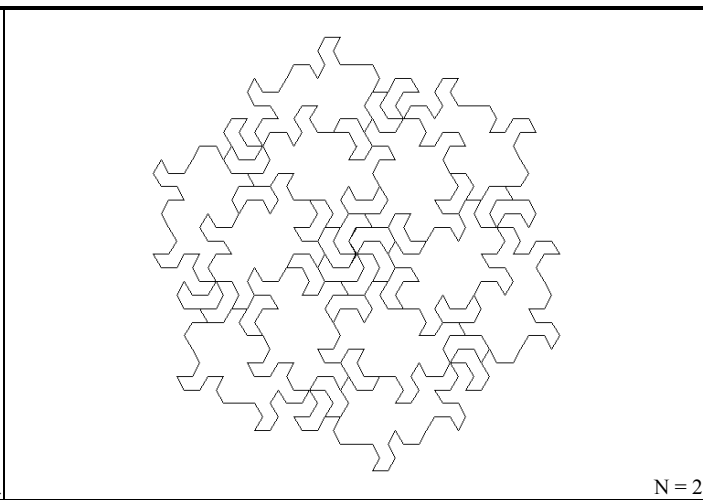
K \rightarrow -



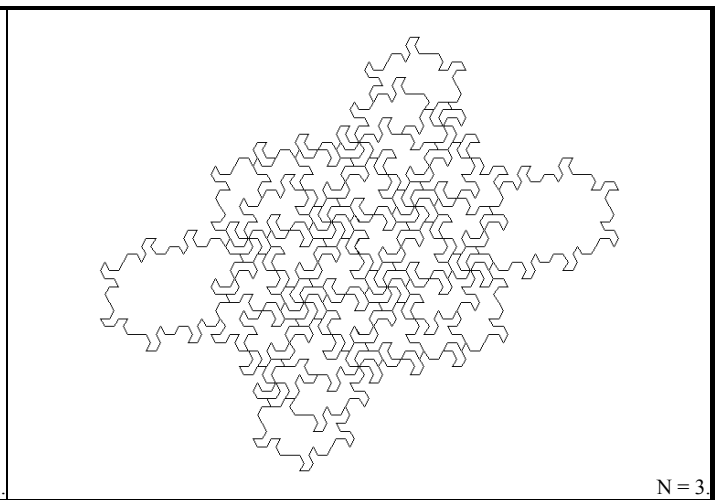
N=4.



N=1.



N=2.



N=3.

AB - 6 Y

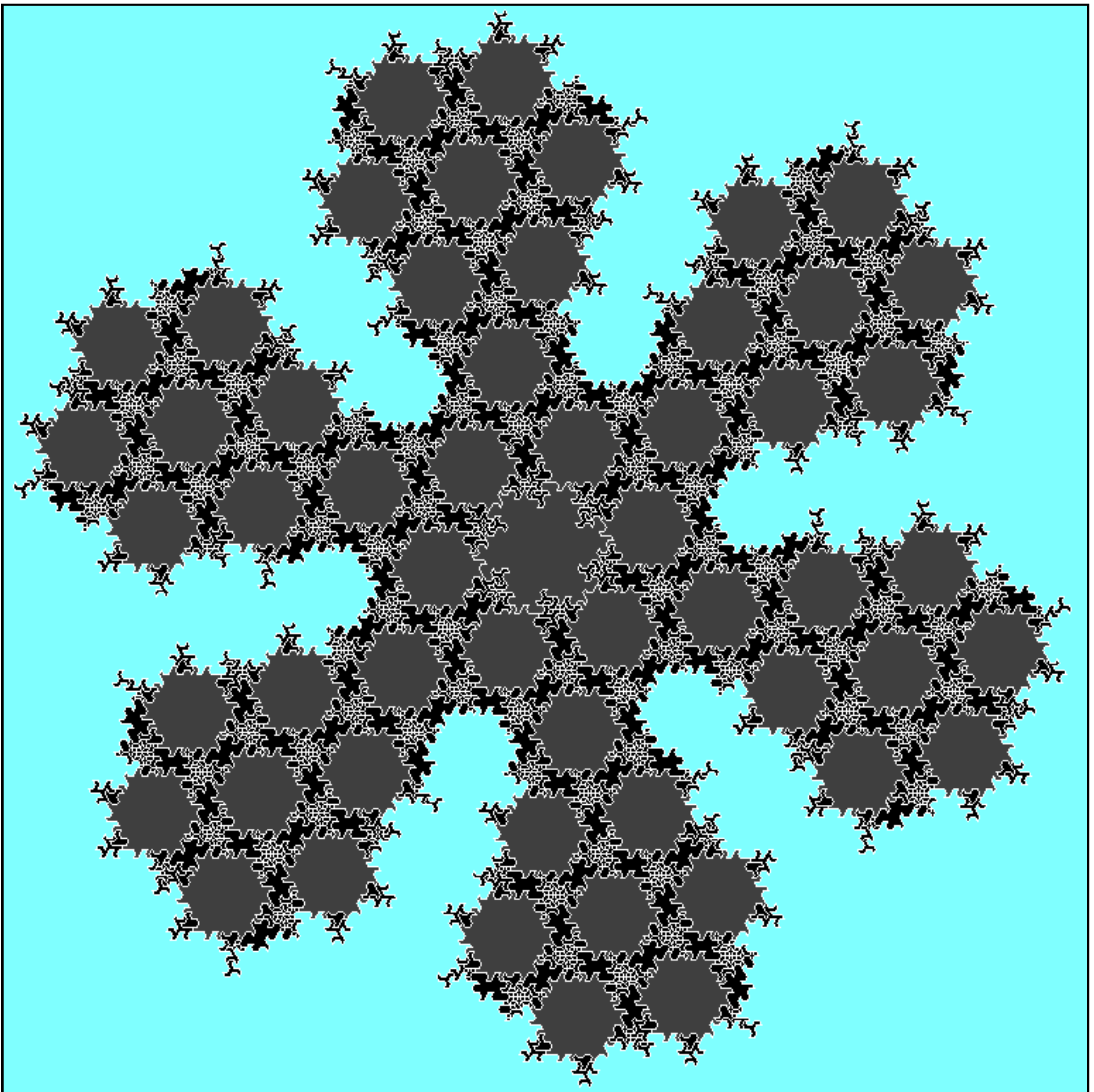
© G. Pernecky, 1993

$\delta = 60^\circ$

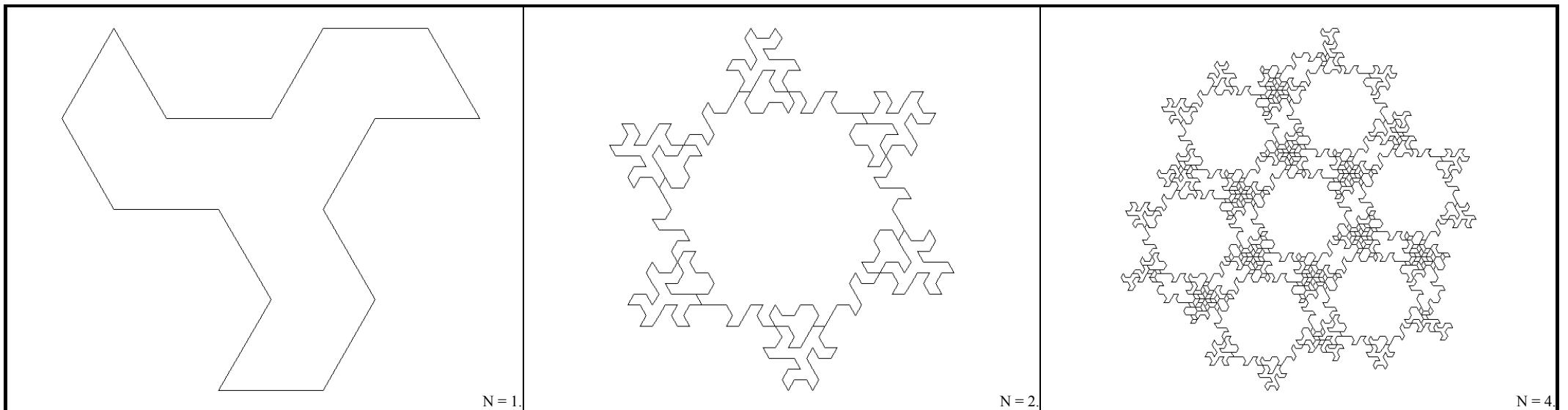
A = F - F - F - F - F

F → F - XF - XF ++ F + F - XF - XF -- XXF + F + F

X → +



N=5.



A % B

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$\delta = 60^\circ$

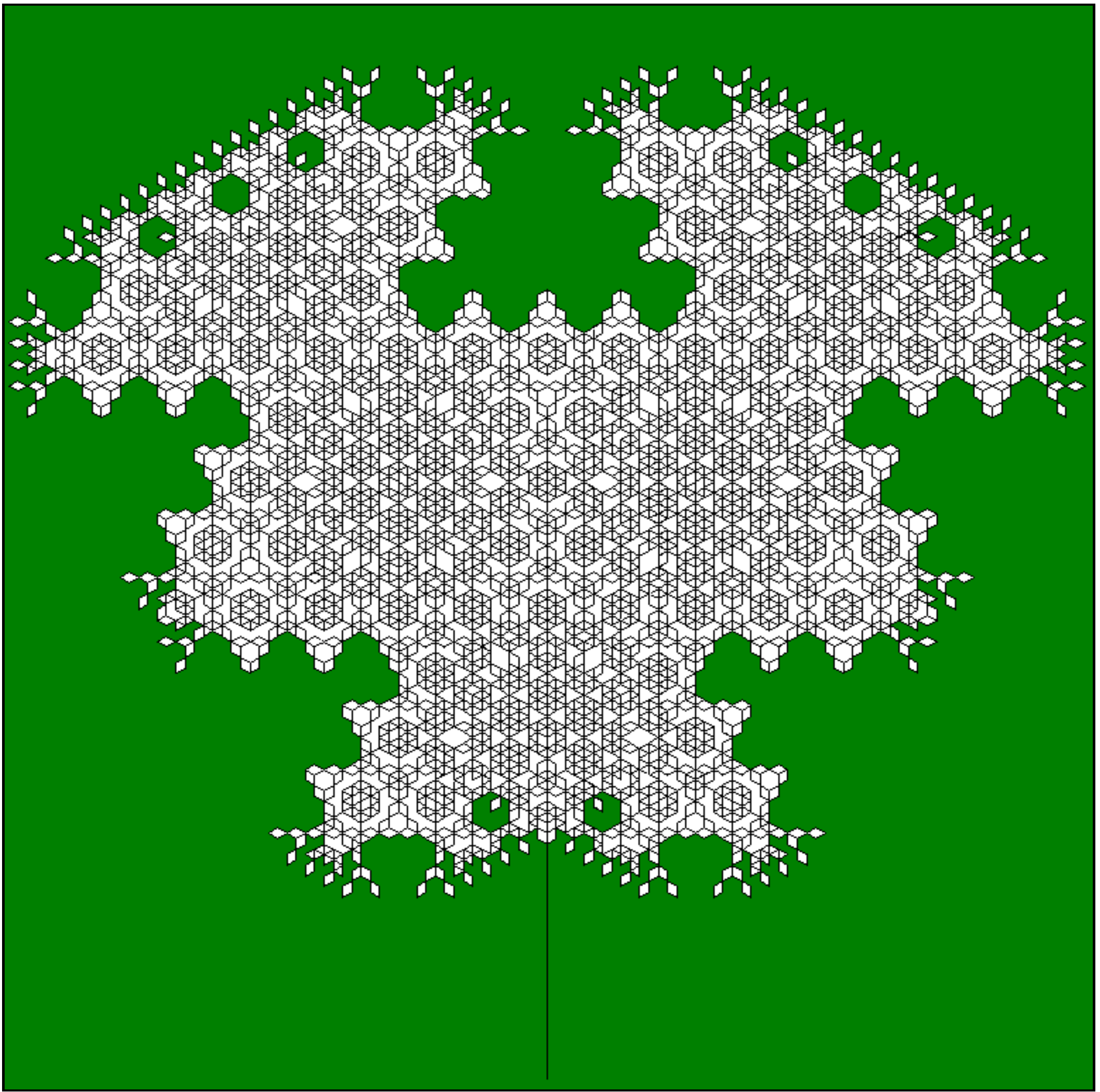
A \rightarrow F + KF + KF + KF + KF + KF

F \rightarrow XF - LXF -- LLFX + KXF + KXF - L

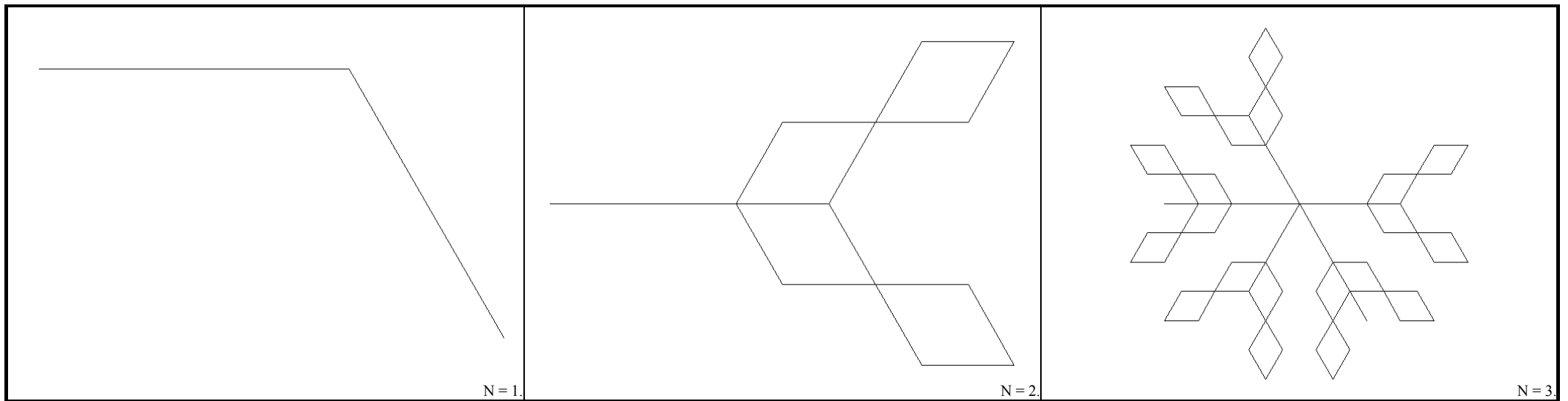
X \rightarrow F-LF- LF ++ KKF + KF

K \rightarrow -

L \rightarrow ++ K + K + K



N = 6.



N = 1.

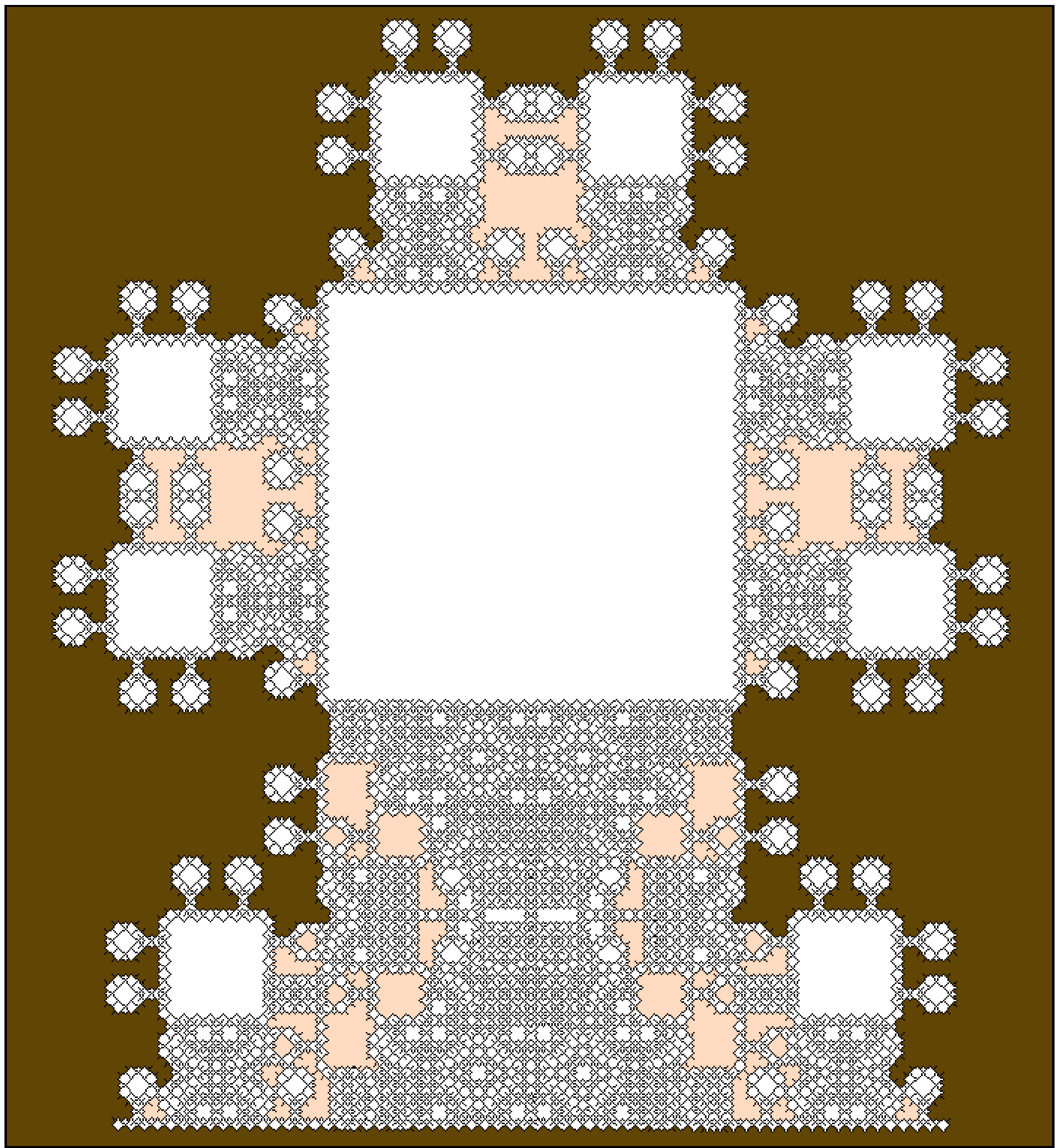
N = 2.

N = 3.

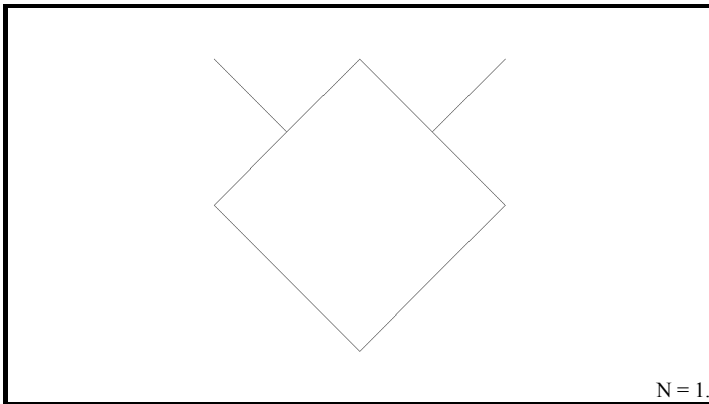
EDEN
(Image rotated 90°)

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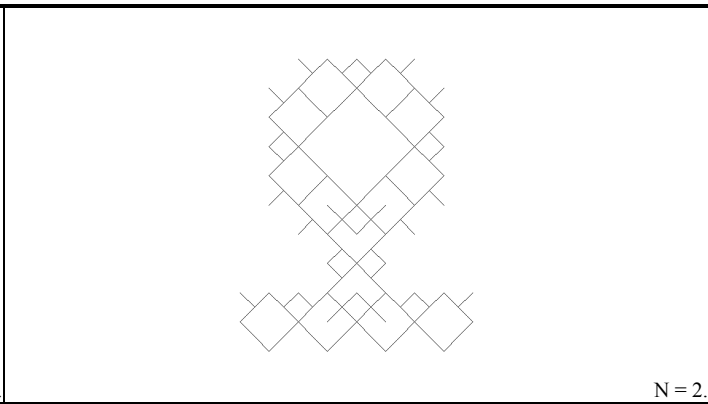
$\delta = 60^\circ$
 $A = F F$
 $X \rightarrow F X + X - - X + X - X + X - - X + X F$



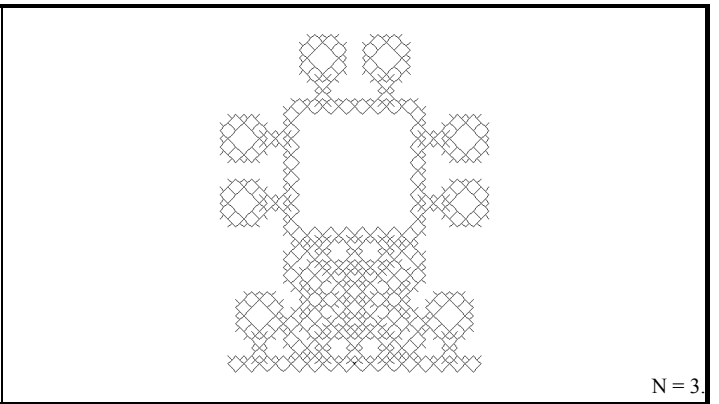
N=4



N=1



N=2



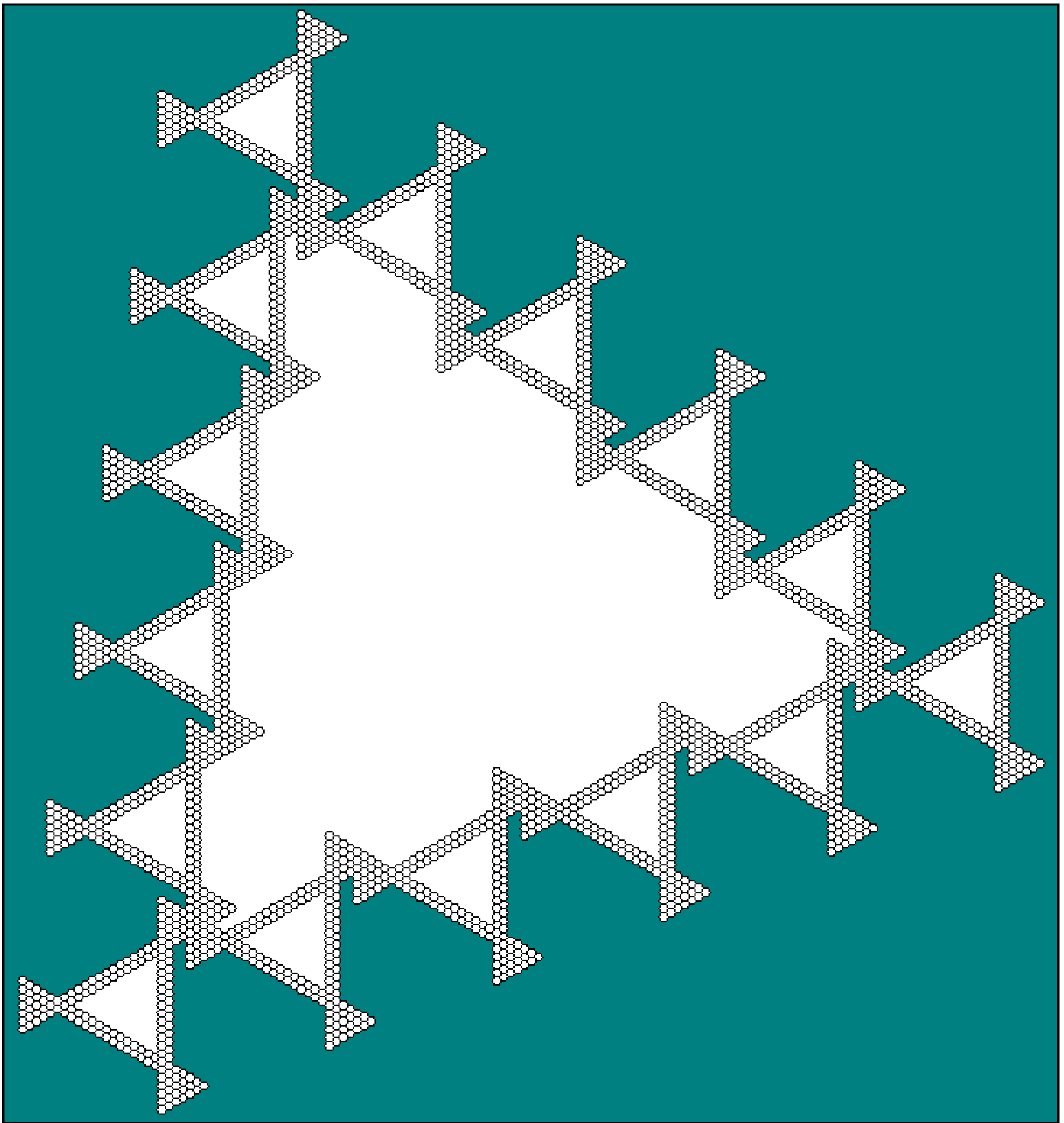
N=3

ICON

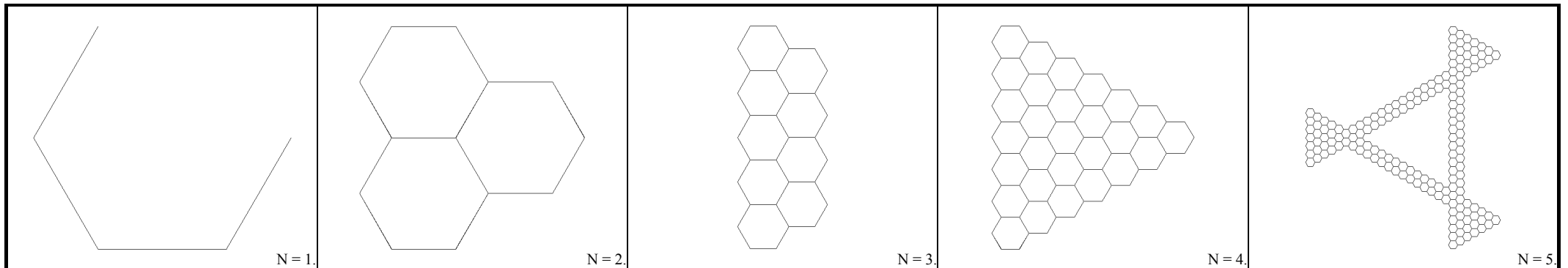
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$\delta = 90^\circ$
 $A = 45^\circ F$

$F \rightarrow F + F -- F + F -- FF + FF --- FF + FF -- F + F -- F + F$



N=7.



AT - ZY

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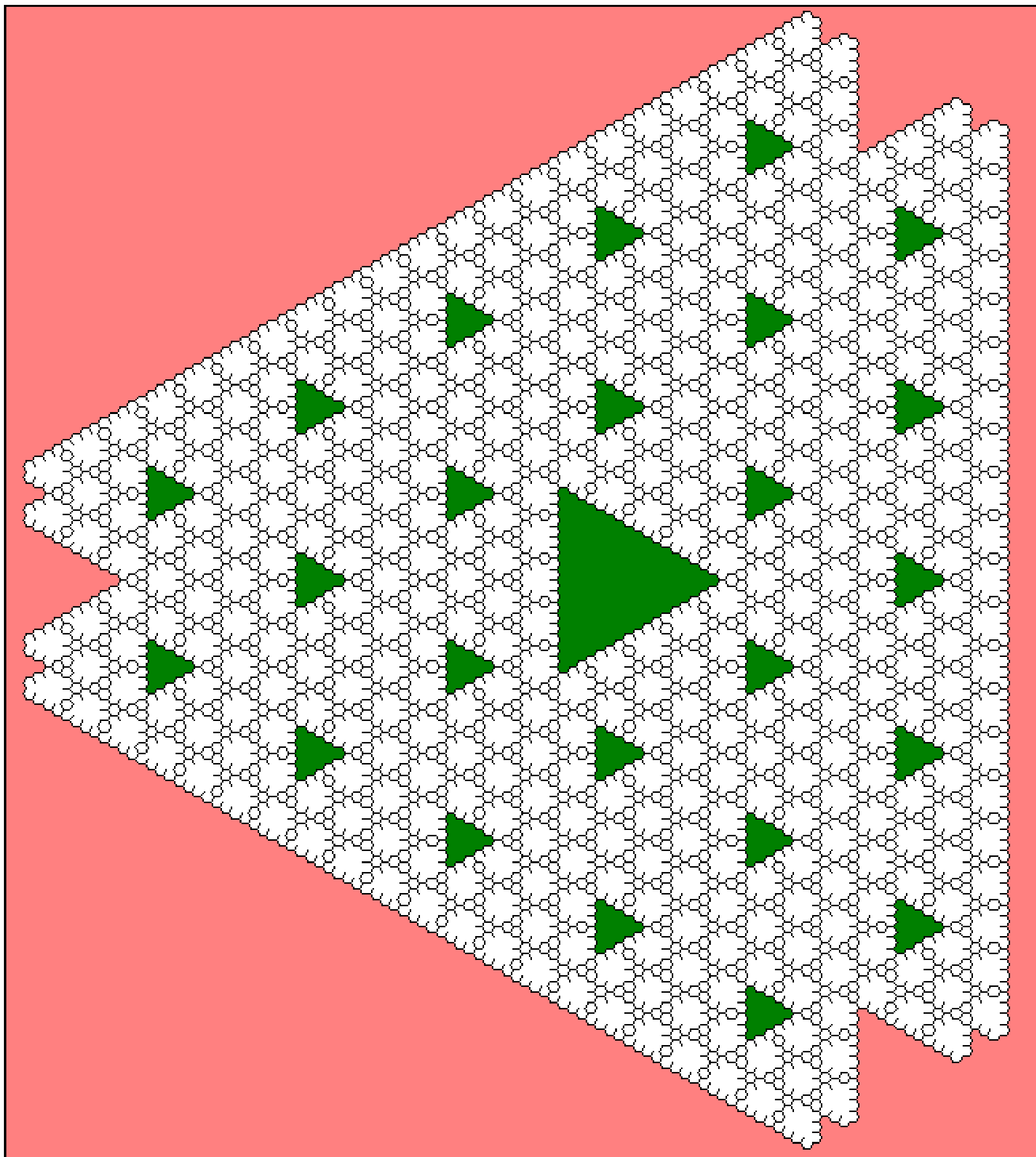
$\delta = 60^\circ$

A = F

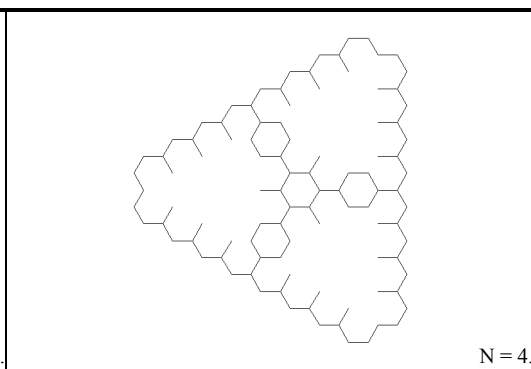
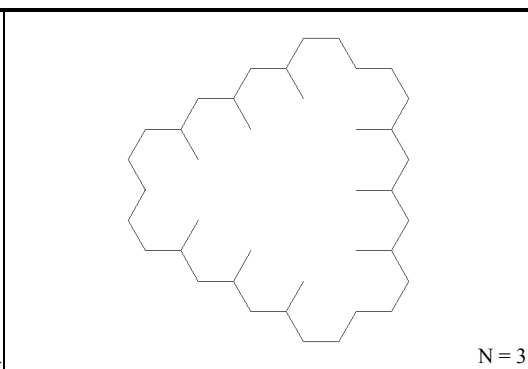
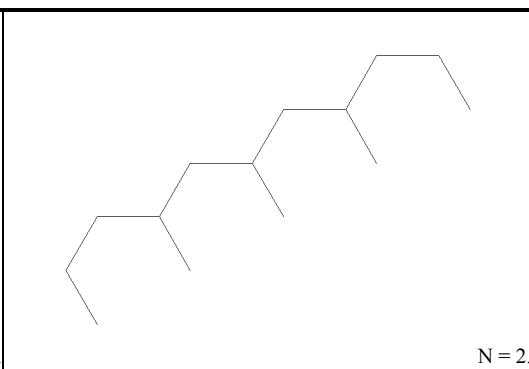
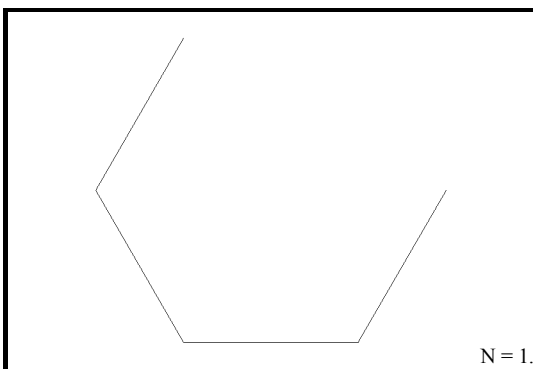
F \rightarrow --FYX - FYX - FYX - FYX

X \rightarrow F + F + F + F + F + F

Y \rightarrow -



N=9.



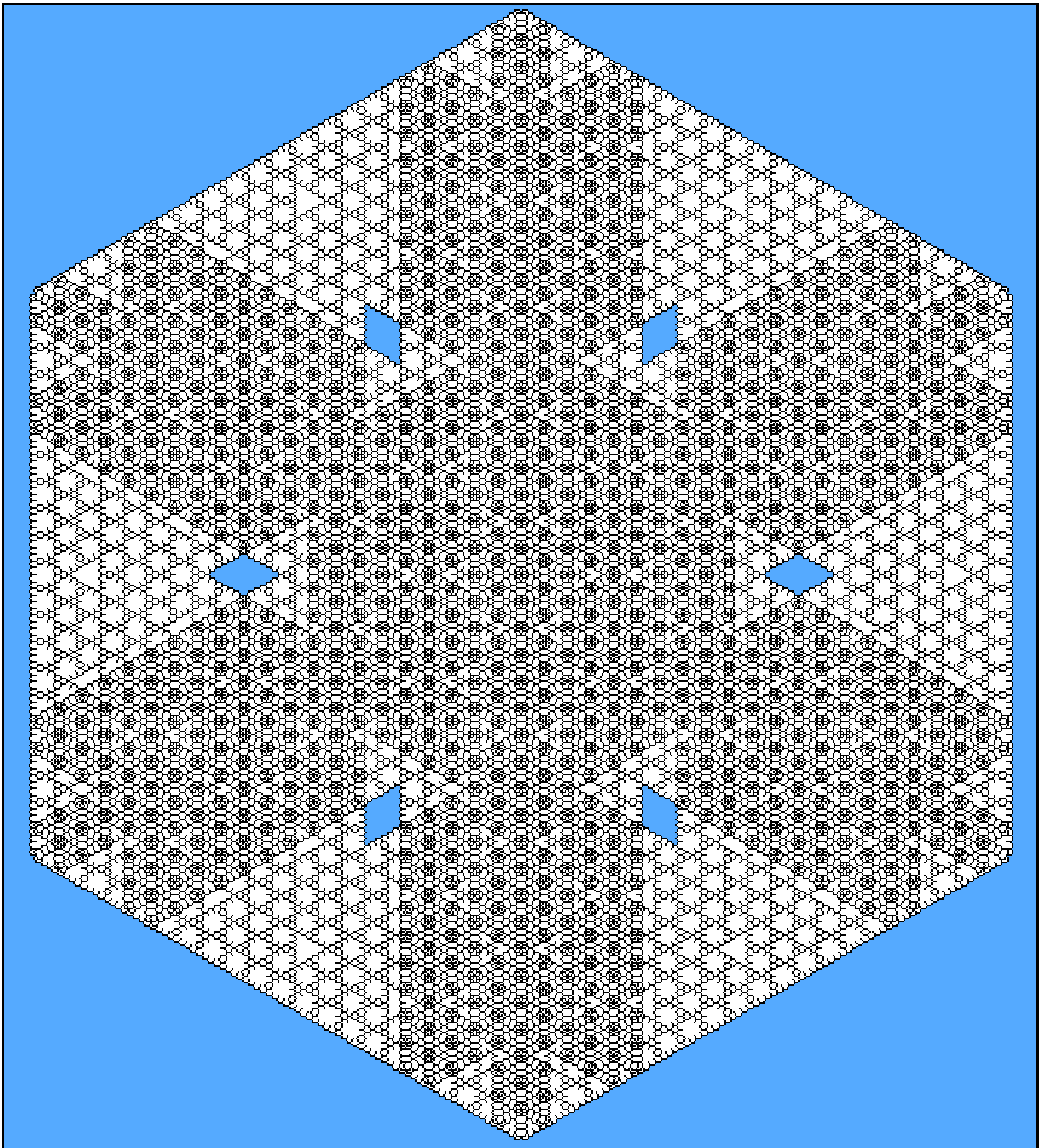
At -1

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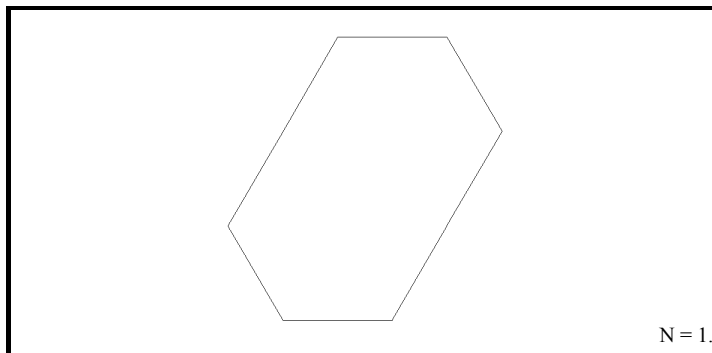
$\delta = 60^\circ$

A = F

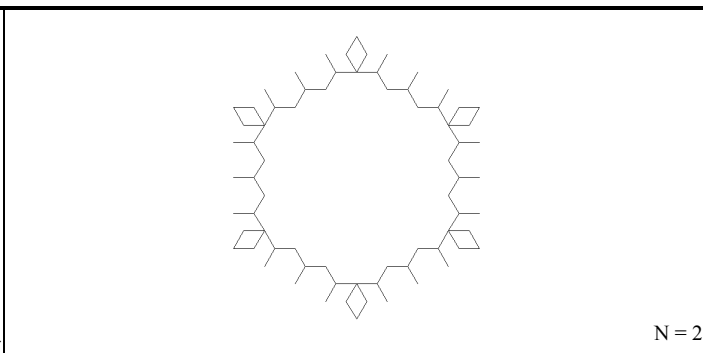
F \rightarrow --F - F - F - F



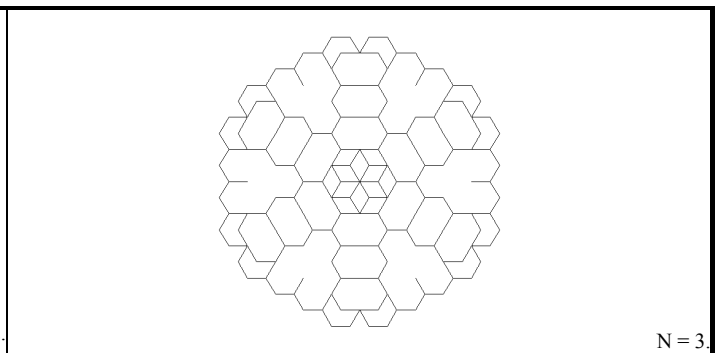
N=9.



N=1.



N=2.



N=3.

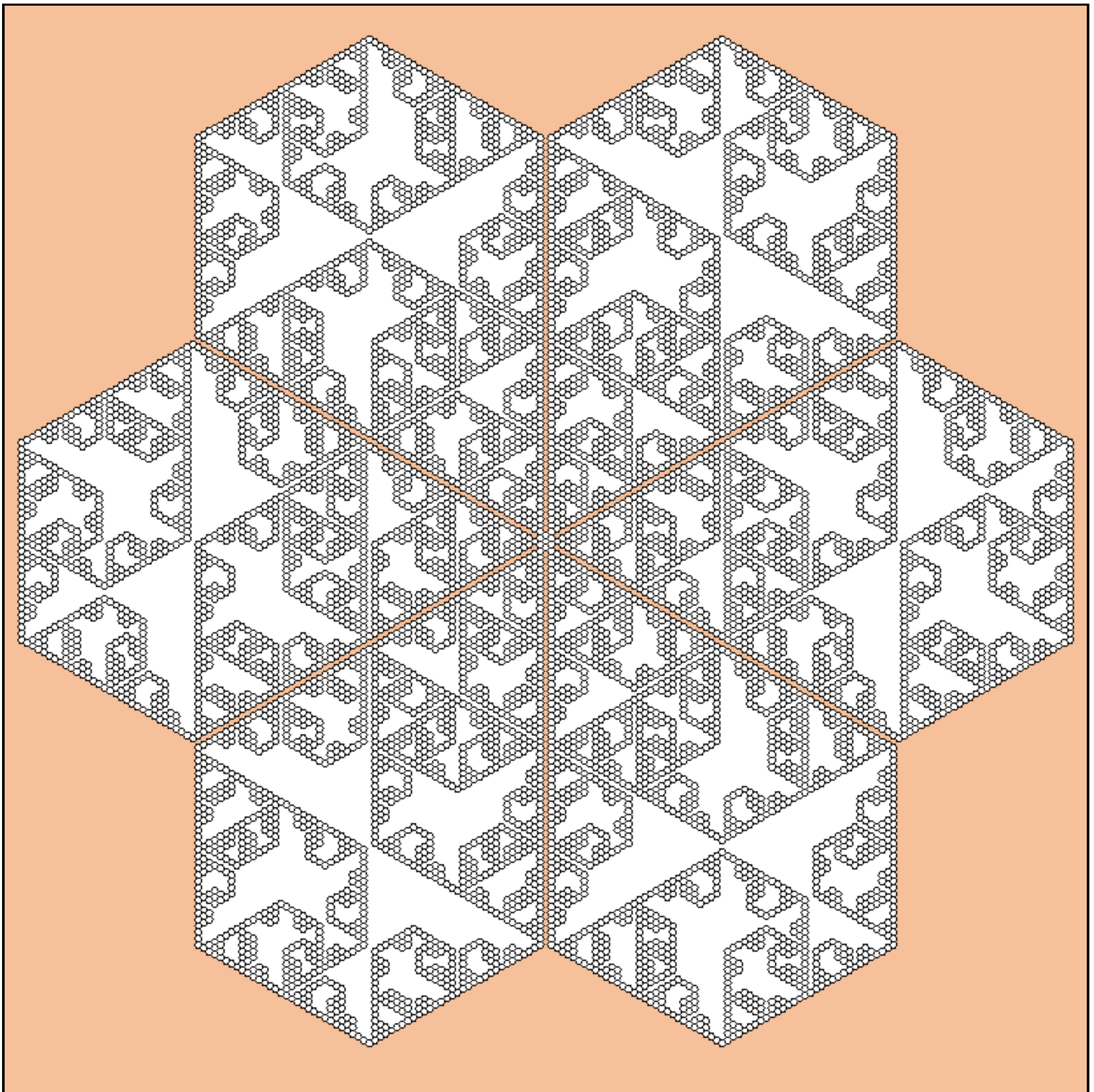
AT - 6

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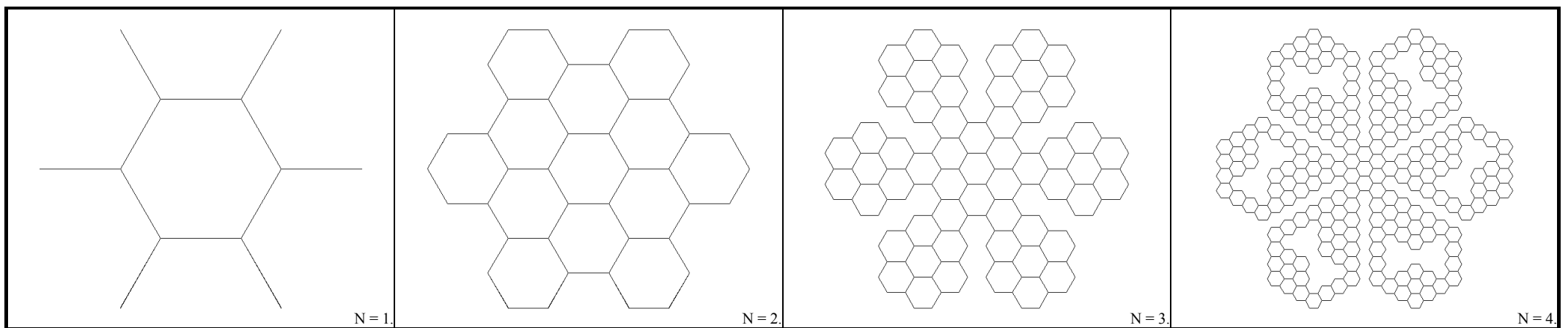
$\delta = 60^\circ$

A = F ++ F ++ F ++ F ++ F ++ F

F \rightarrow -- F - F - F - F



N = 6.



N = 1.

N = 2.

N = 3.

N = 4.

AT - 6YZ

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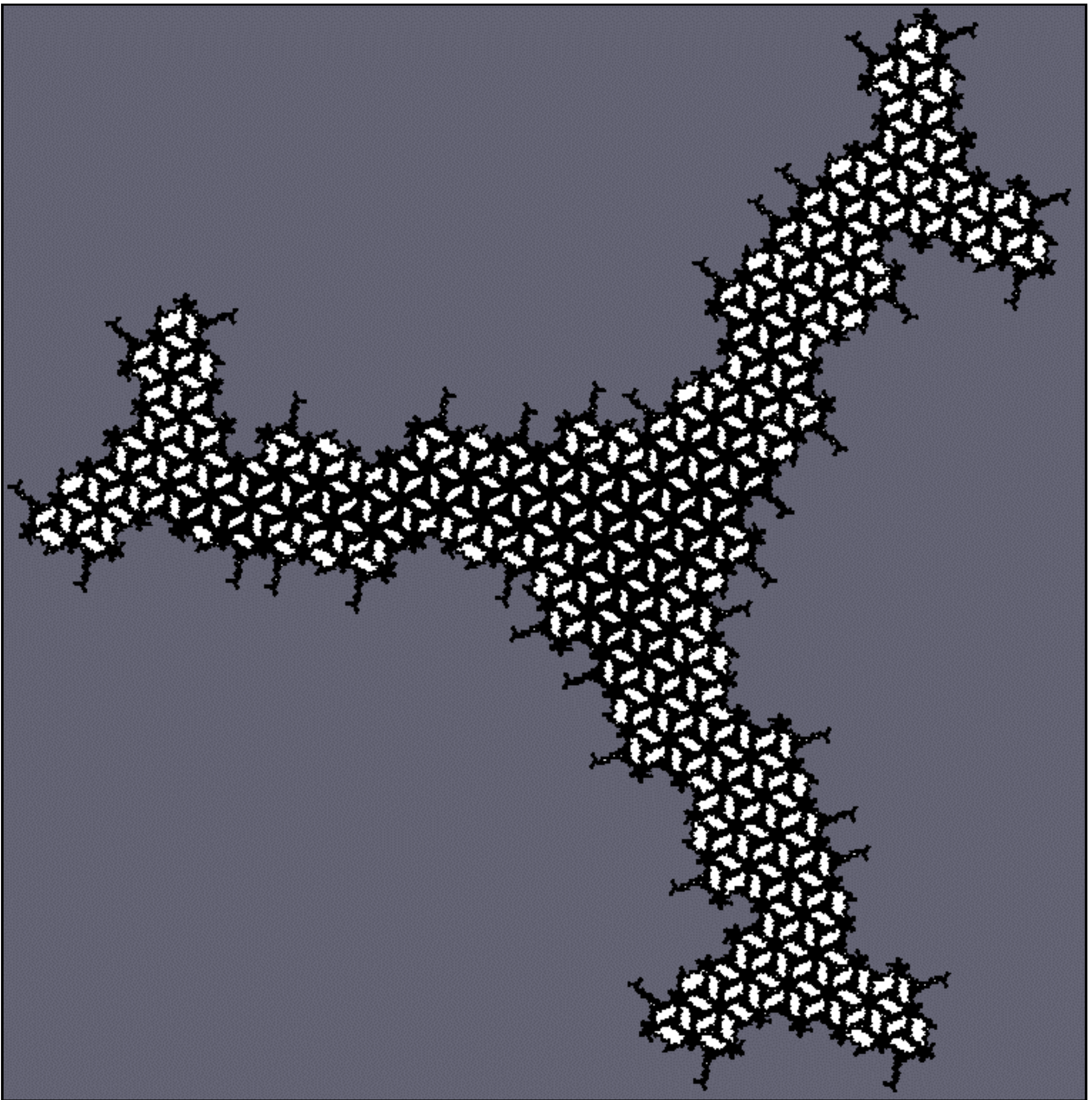
$\delta = 60^\circ$

A \rightarrow F - F - F - F - F - F

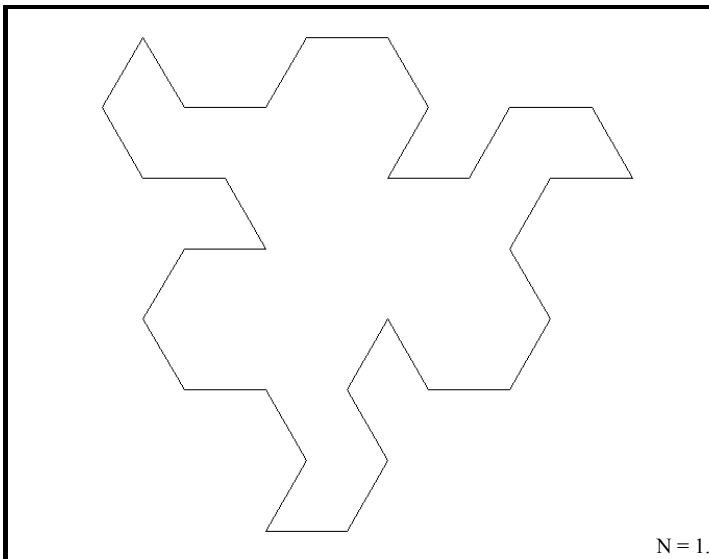
F \rightarrow -- XYF -- XYF - XYF

X \rightarrow F + F + F + F + F + F

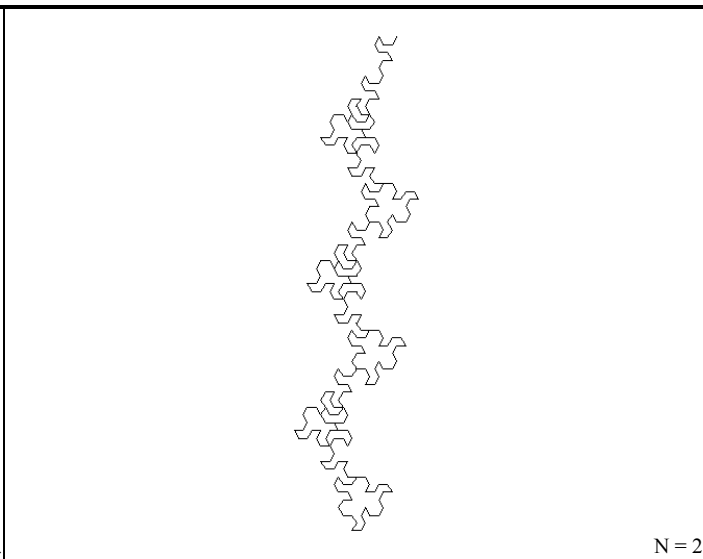
Y \rightarrow -



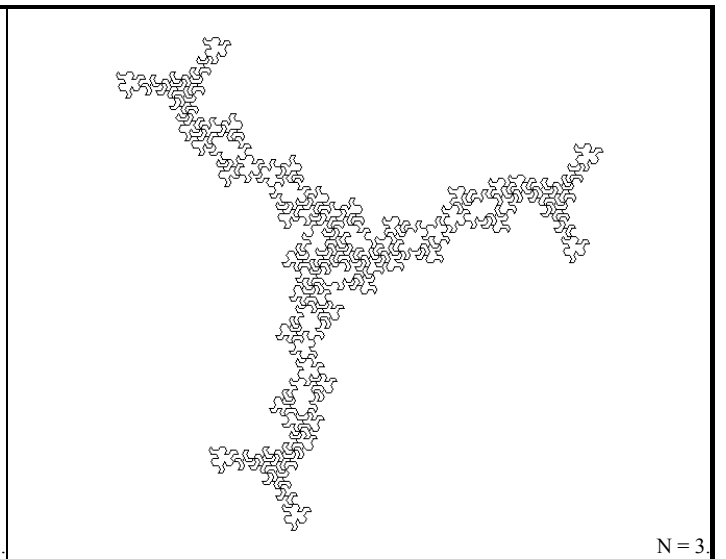
N = 6.



N = 1.



N = 2.



N = 3.

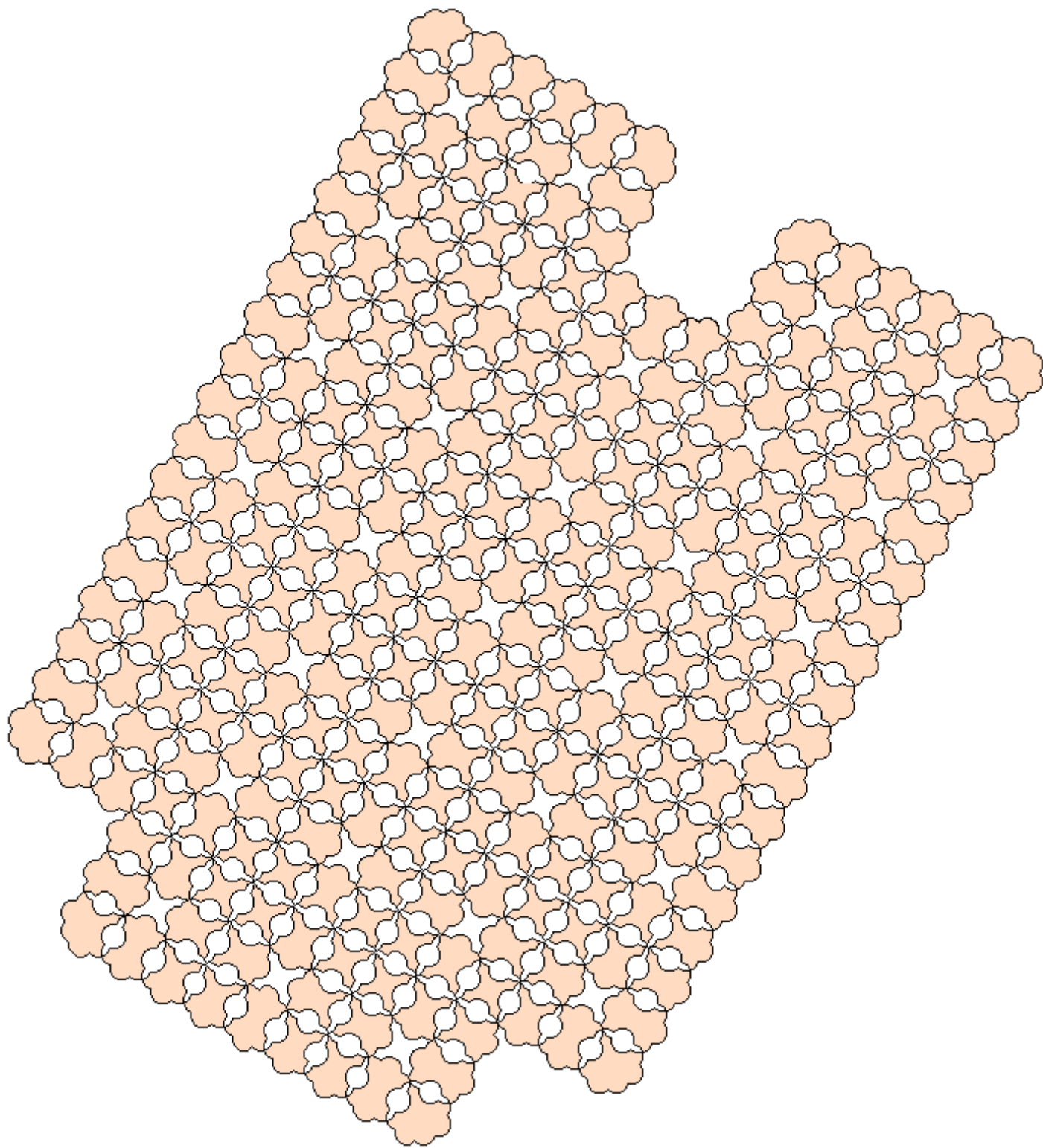
AB - 3

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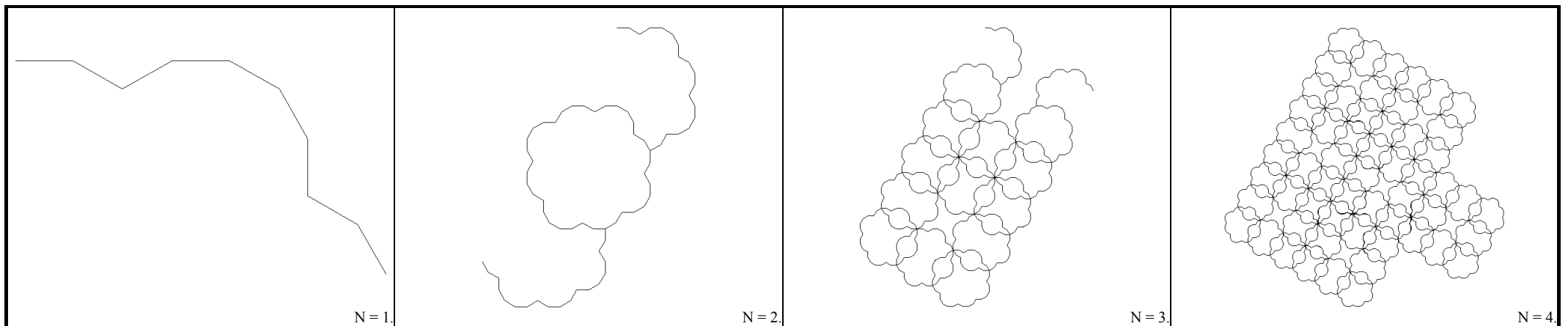
$\delta = 60^\circ$

A = F - F - F

F \rightarrow F - F - F ++ F + F - F - F -- F + F + F



N=5.



N=1.

N=2.

N=3.

N=4.

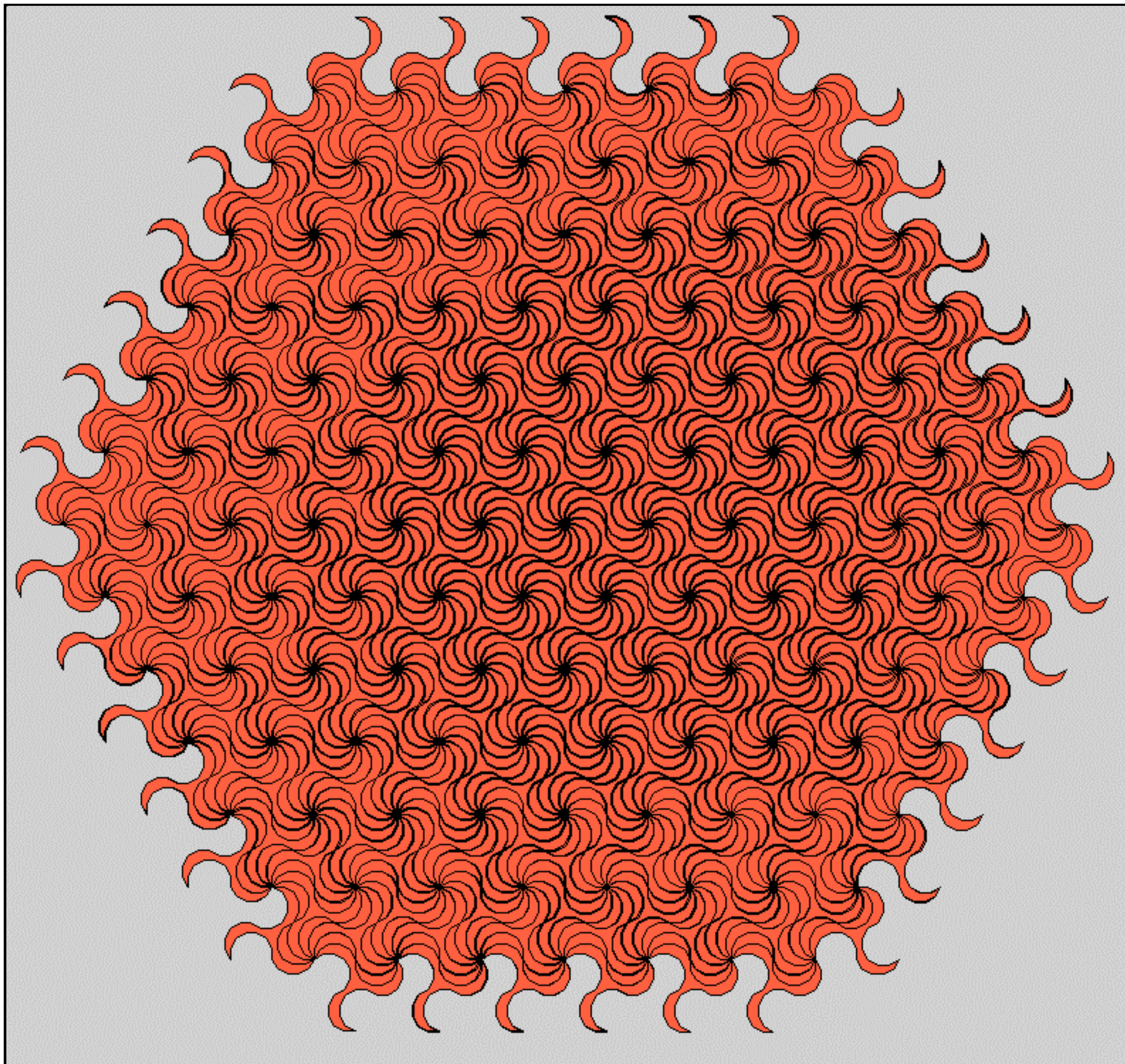
NET - 12

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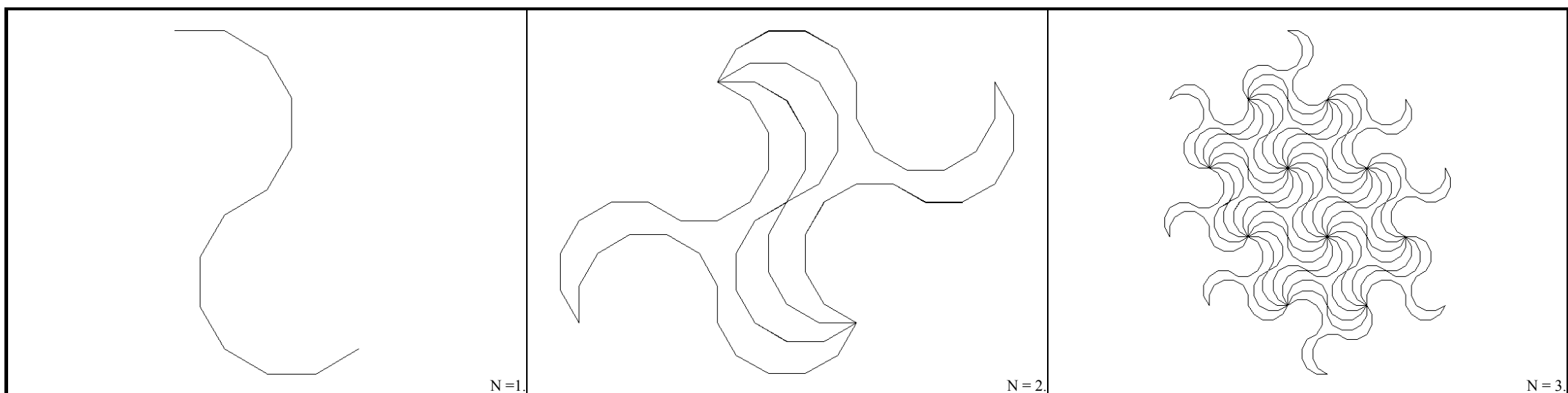
$\delta = 30^\circ$

A = F

F \rightarrow F - F ++ F - F - F - F ++ F - F



N=6.



N=1

N=2

N=3

Spiral - 12

$$\delta = 30^\circ$$

$$A = F$$

$$F \rightarrow FX - FX - FX - FX - FX - FX - F + F + F + F + F + FY \mid$$

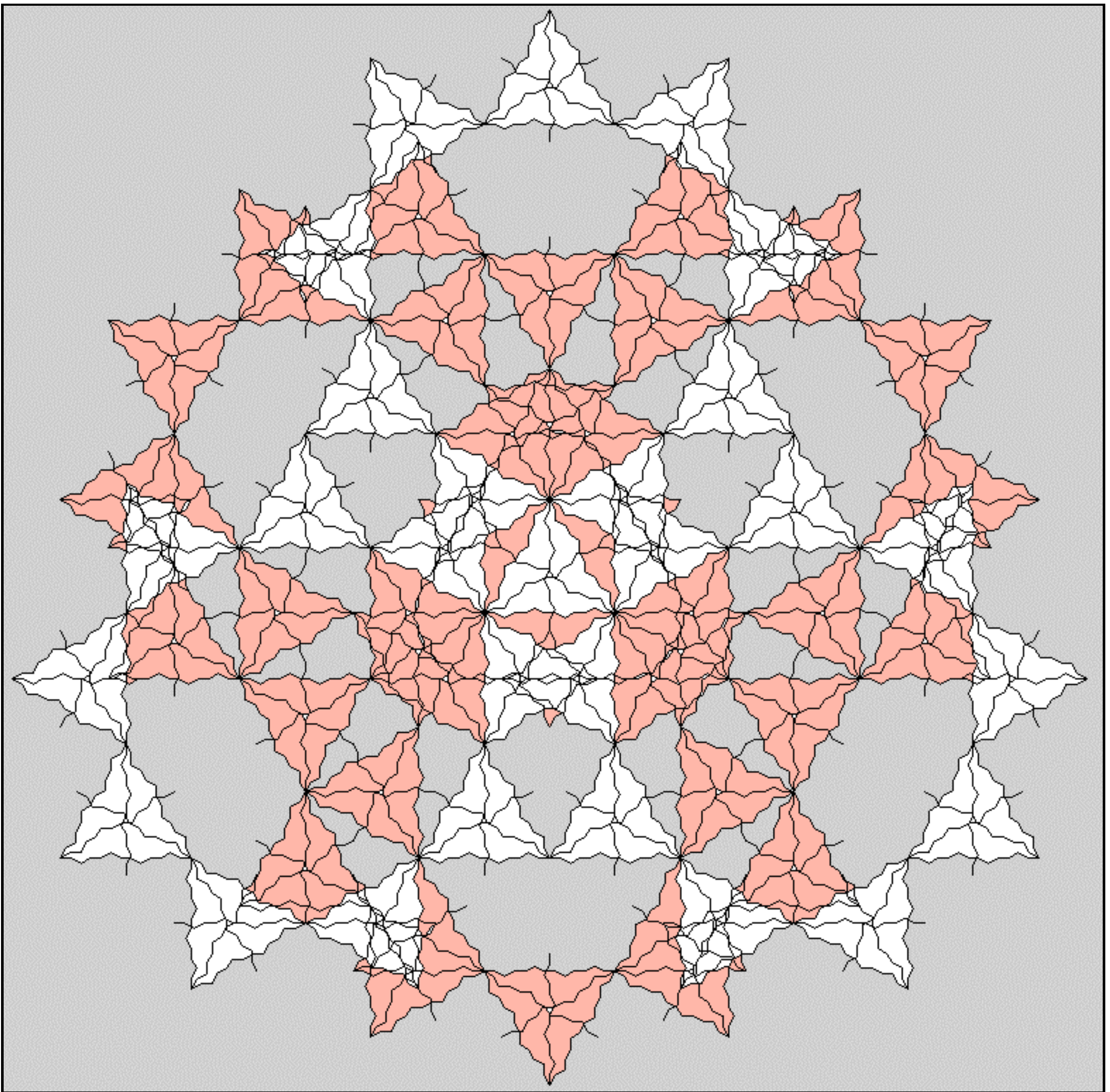
$$Y \rightarrow GX - GX - GX - GX - GX - GX - G + G + G + G + G + GZ \mid$$

$$Z \rightarrow GX GX GX GX GX GX G G G G G GY \mid$$

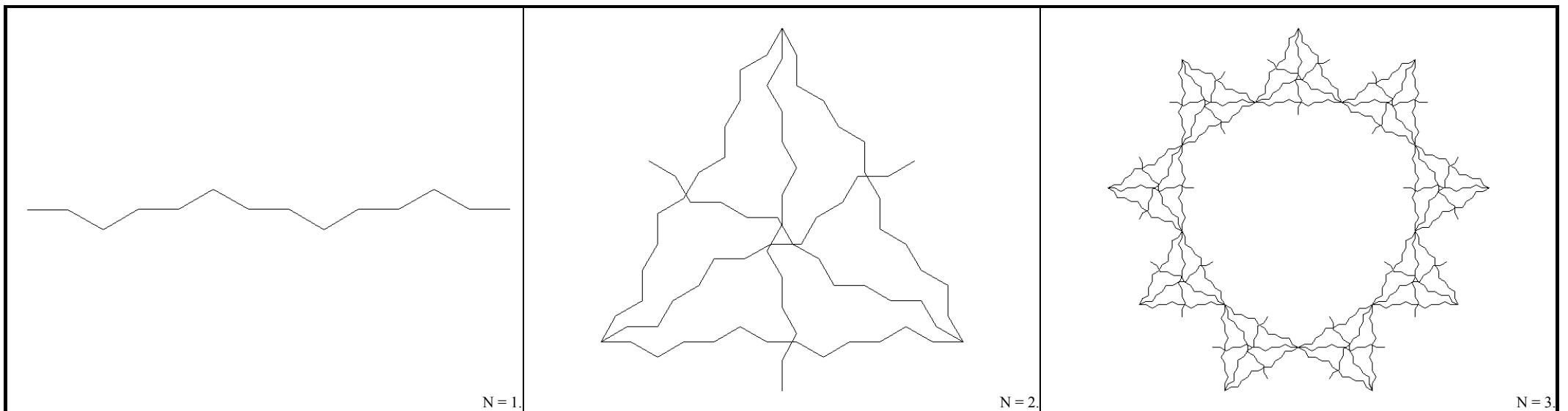
$$X \rightarrow ++$$

(\mid = try to turn 180°)

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N=4.



N=1.

N=2.

N=3.

Thorn-Bush -1

$\delta = 30^\circ$

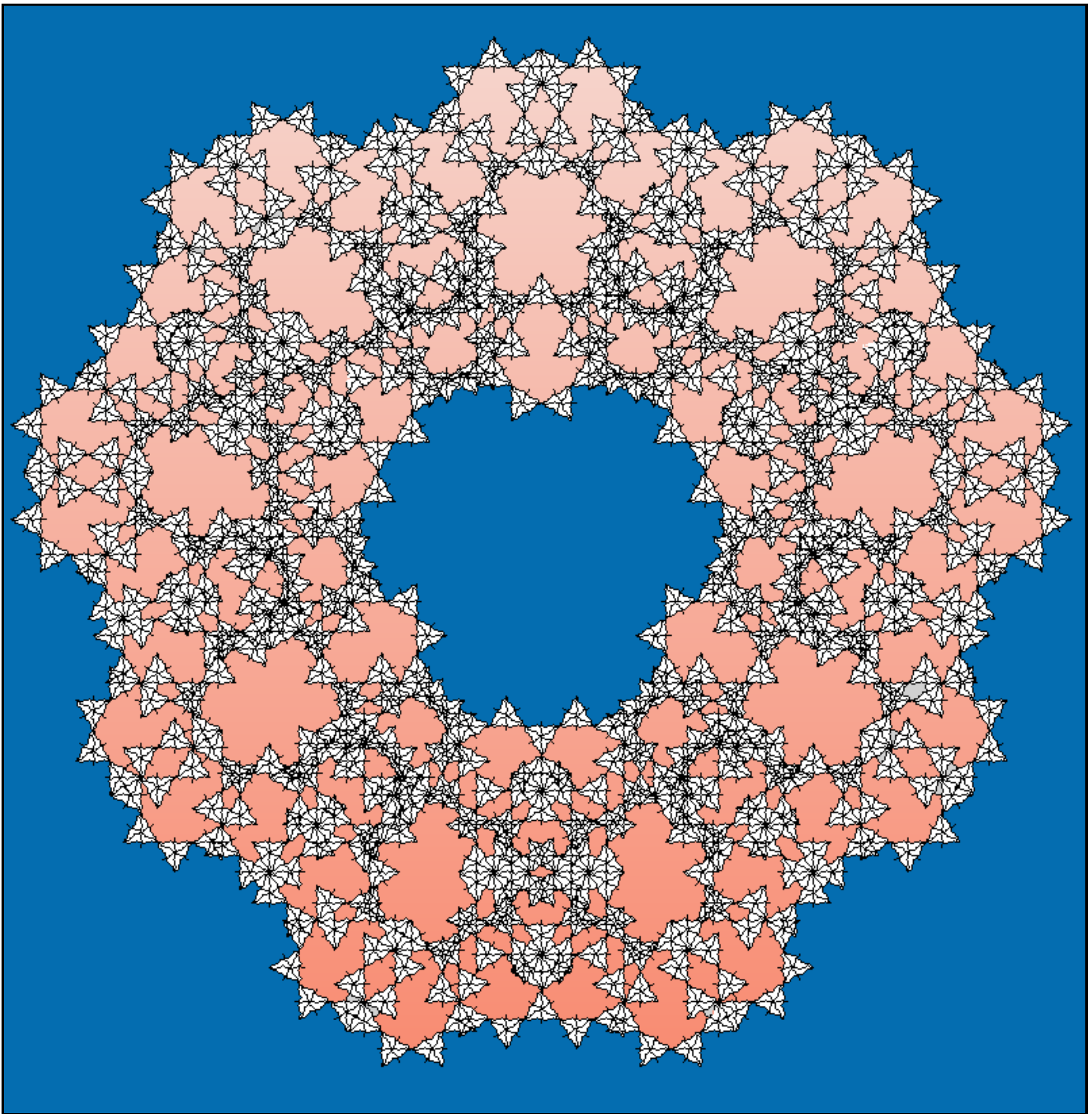
A = F

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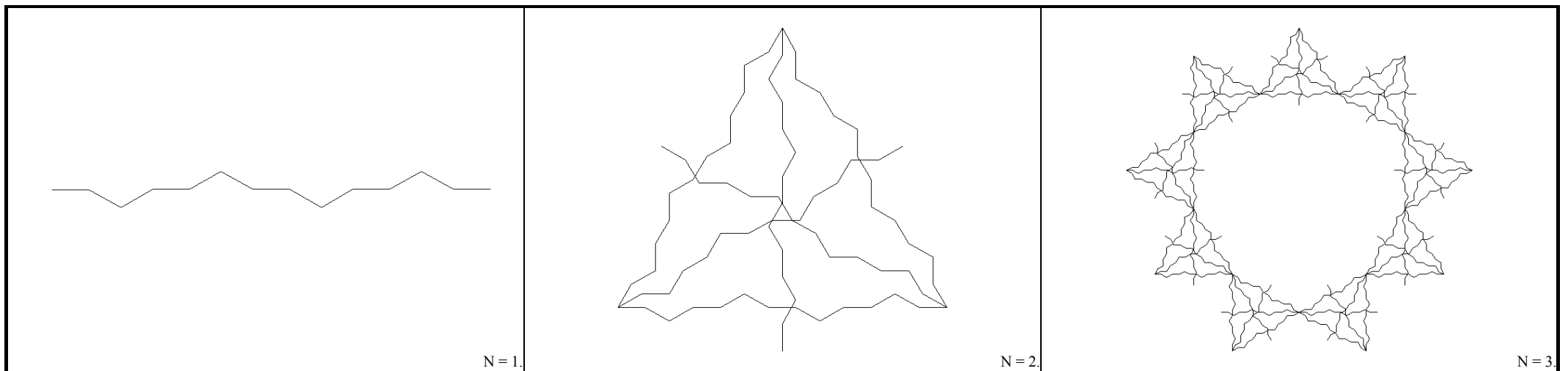
F \rightarrow FVX- FV ++ FVX- FV + FVXX-- FV + FVX- FV ++ FVX- FV + FVXX-- FV + FV

X \rightarrow ++

V \rightarrow +++++



N=5.



N=1.

N=2.

N=3.

Thorn-Bush -2

$\delta = 30^\circ$

A = F

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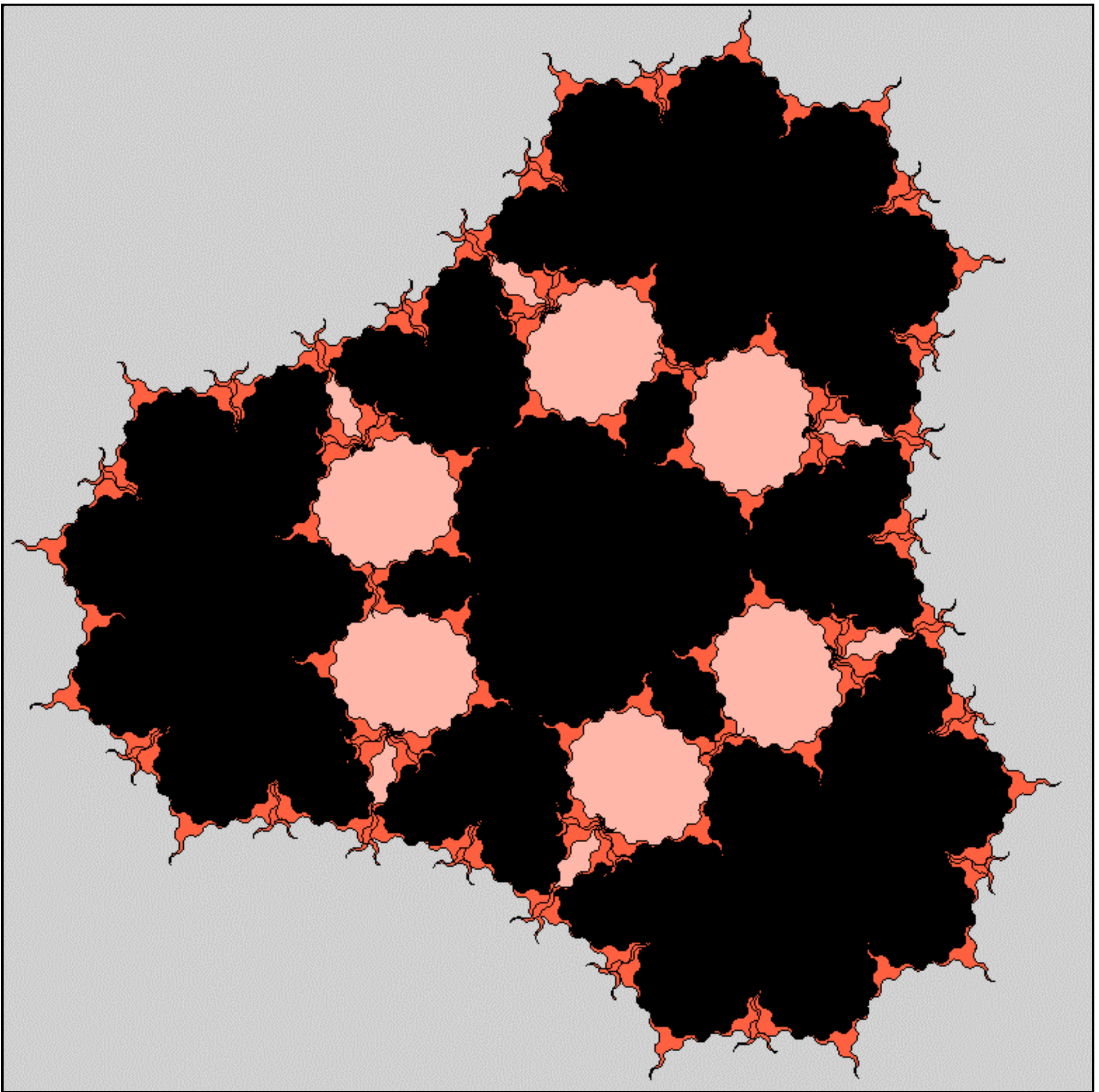
F \rightarrow FVX- FV ++ FVX- FV + FVXX-- FV + FVX- FV ++ FVX- FV + FVXX-- FV + FVY

X \rightarrow ++

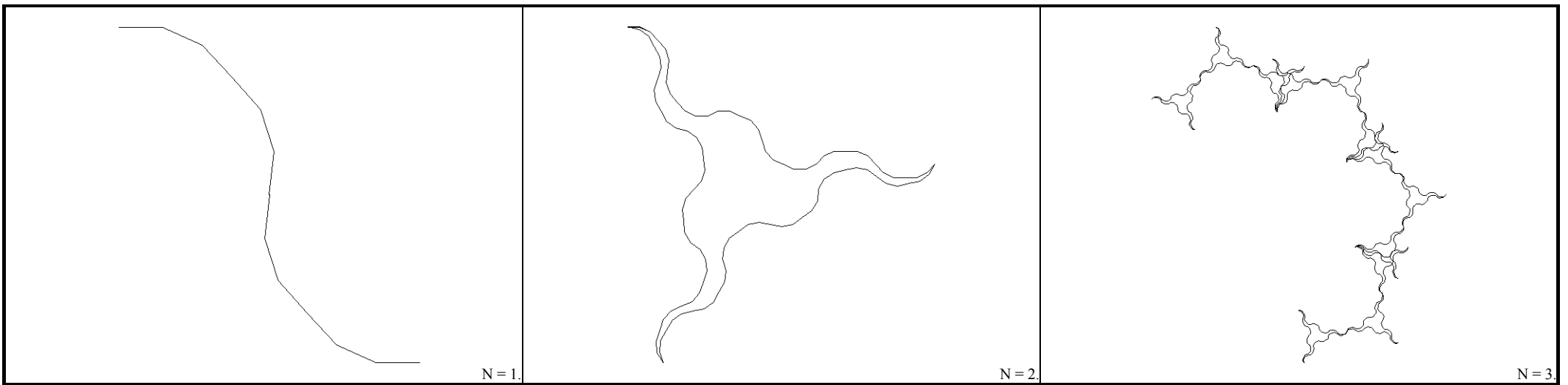
V \rightarrow ++++

Y \rightarrow Z

Z \rightarrow ++++



N=4.



N=1.

N=2.

N=3.

TWIX - 15

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$\delta = 24^\circ$

A = F

F \rightarrow FX - FX - FTYFX - FX - FTYF + F + FTYF + F + FW

X \rightarrow ++

Y \rightarrow | Z

Z \rightarrow |

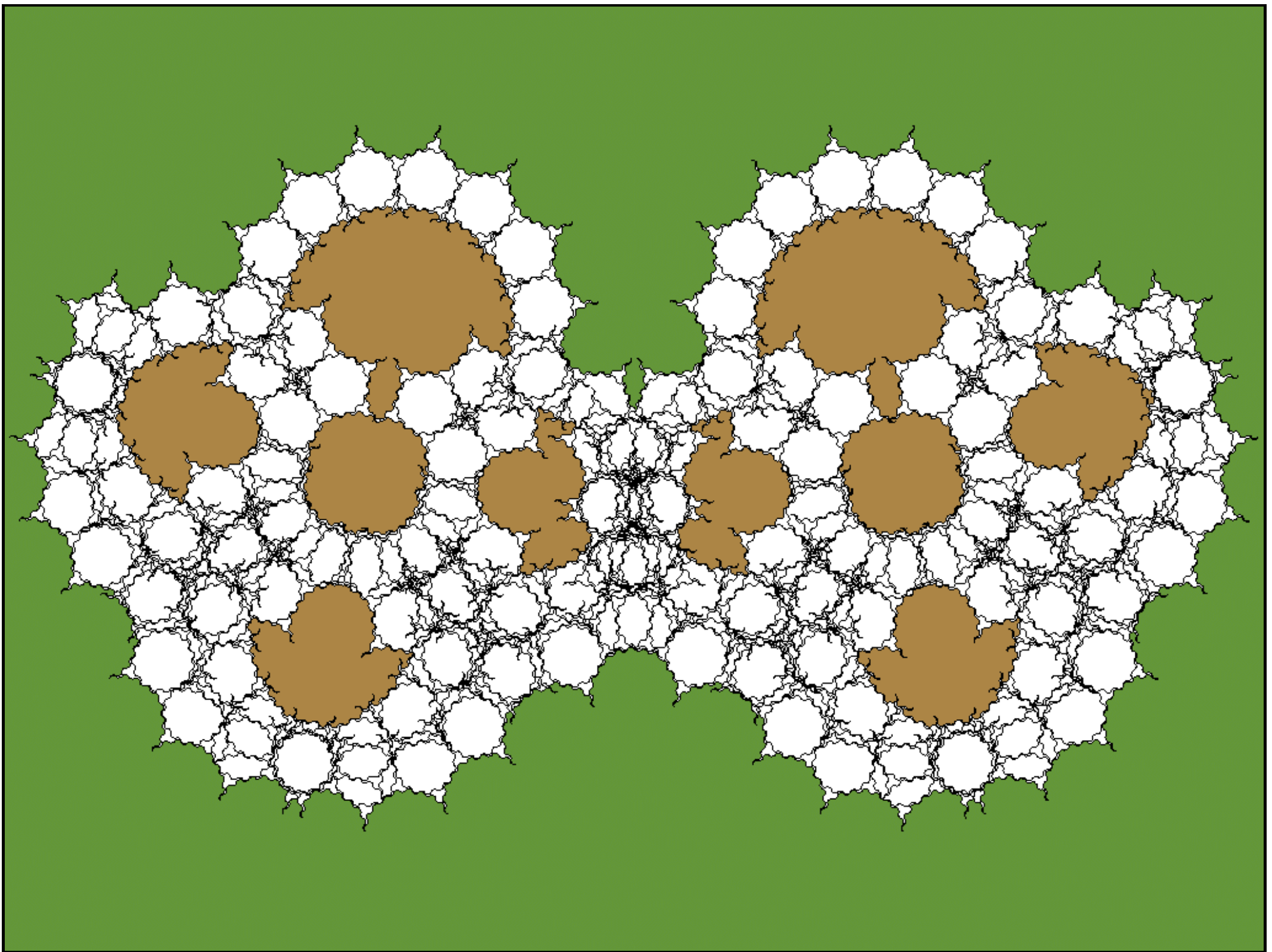
(| = try to turn 180°)

T \rightarrow V

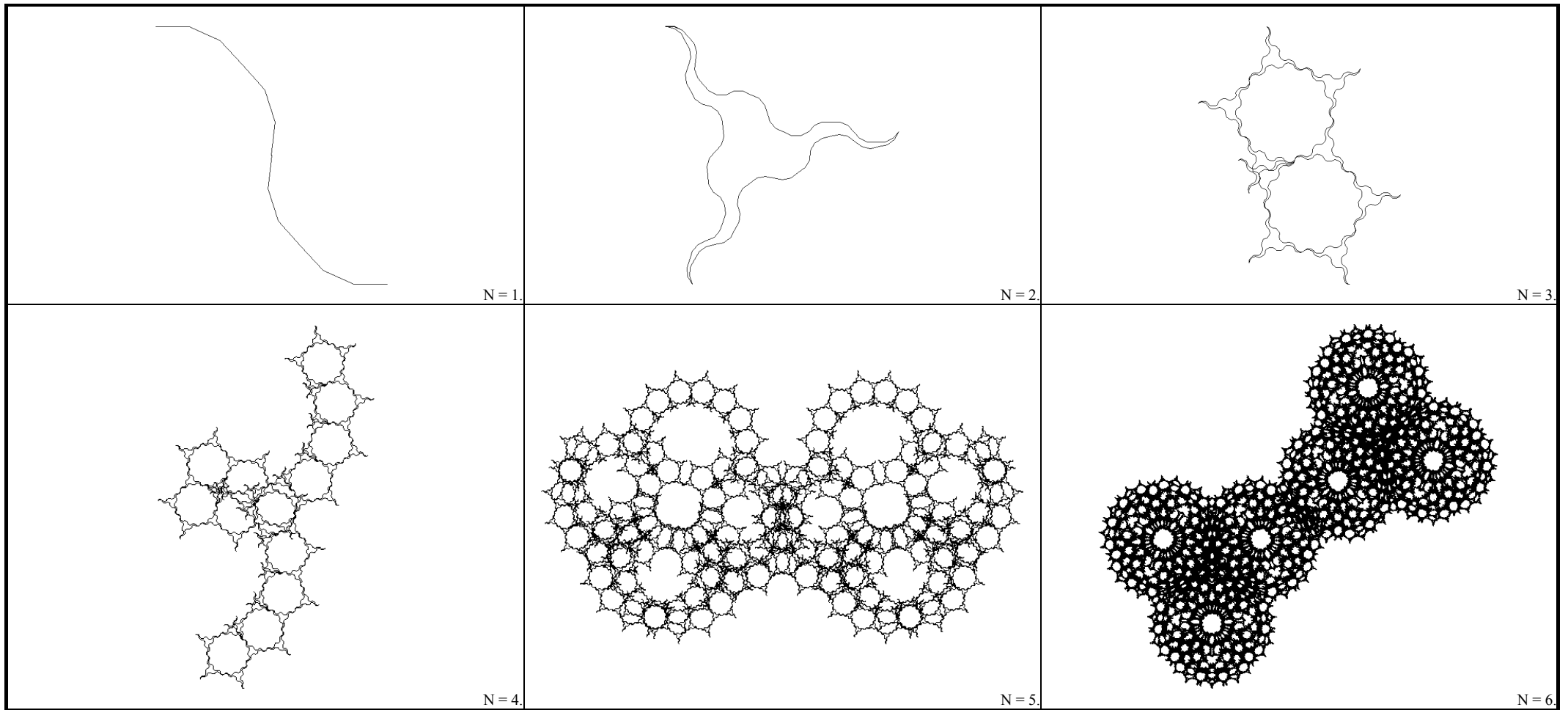
V \rightarrow |

W \rightarrow R

R \rightarrow -



N=5.



N=1.

N=2.

N=3.

N=4.

N=5.

N=6.

Twin - 15

$\delta = 24^\circ$

A = F

F \rightarrow FX- FX- FYFX- FX- FTYF + F + FYF + F + F

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X \rightarrow ++

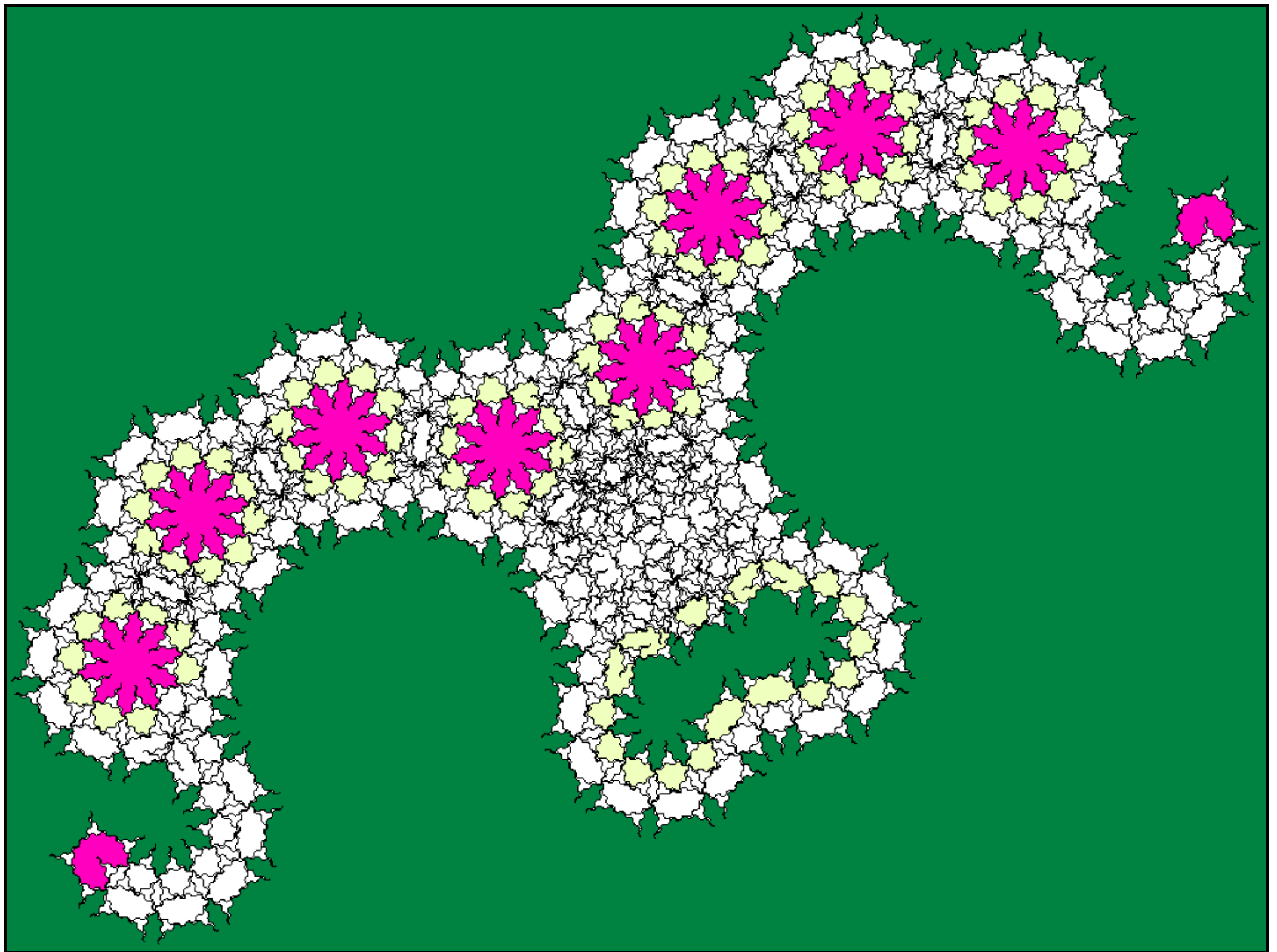
T \rightarrow V

V \rightarrow |

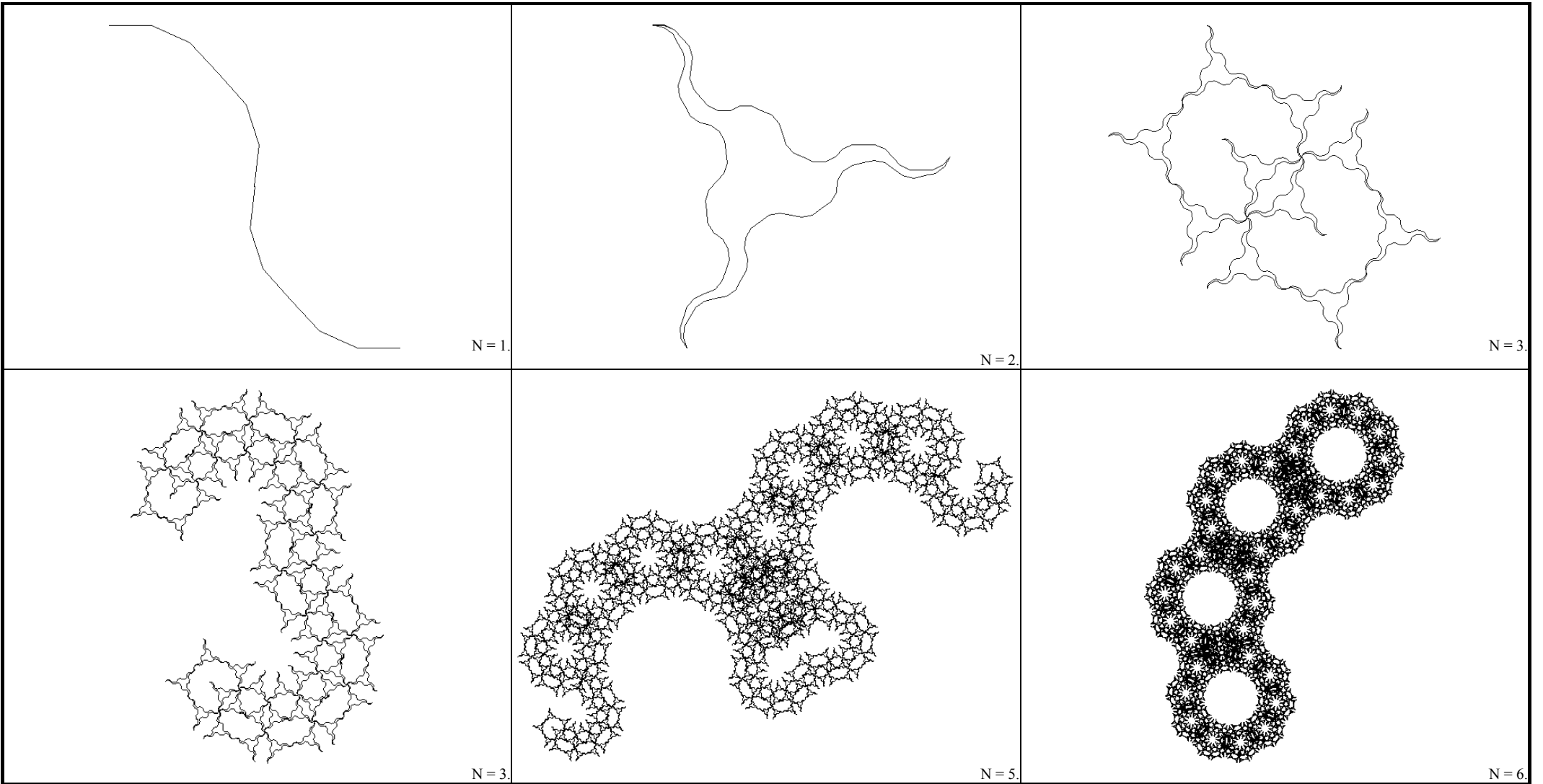
(| = try to turn 180°)

Y \rightarrow | Z

Z \rightarrow |



N=5.



N=1.

N=2.

N=3.

N=3.

N=5.

N=6.

Twin - 30

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A = F

$\delta = 12^\circ$

F = FX- -FX- -FYFX- -FX- -FTYF++F++FYF++F++F

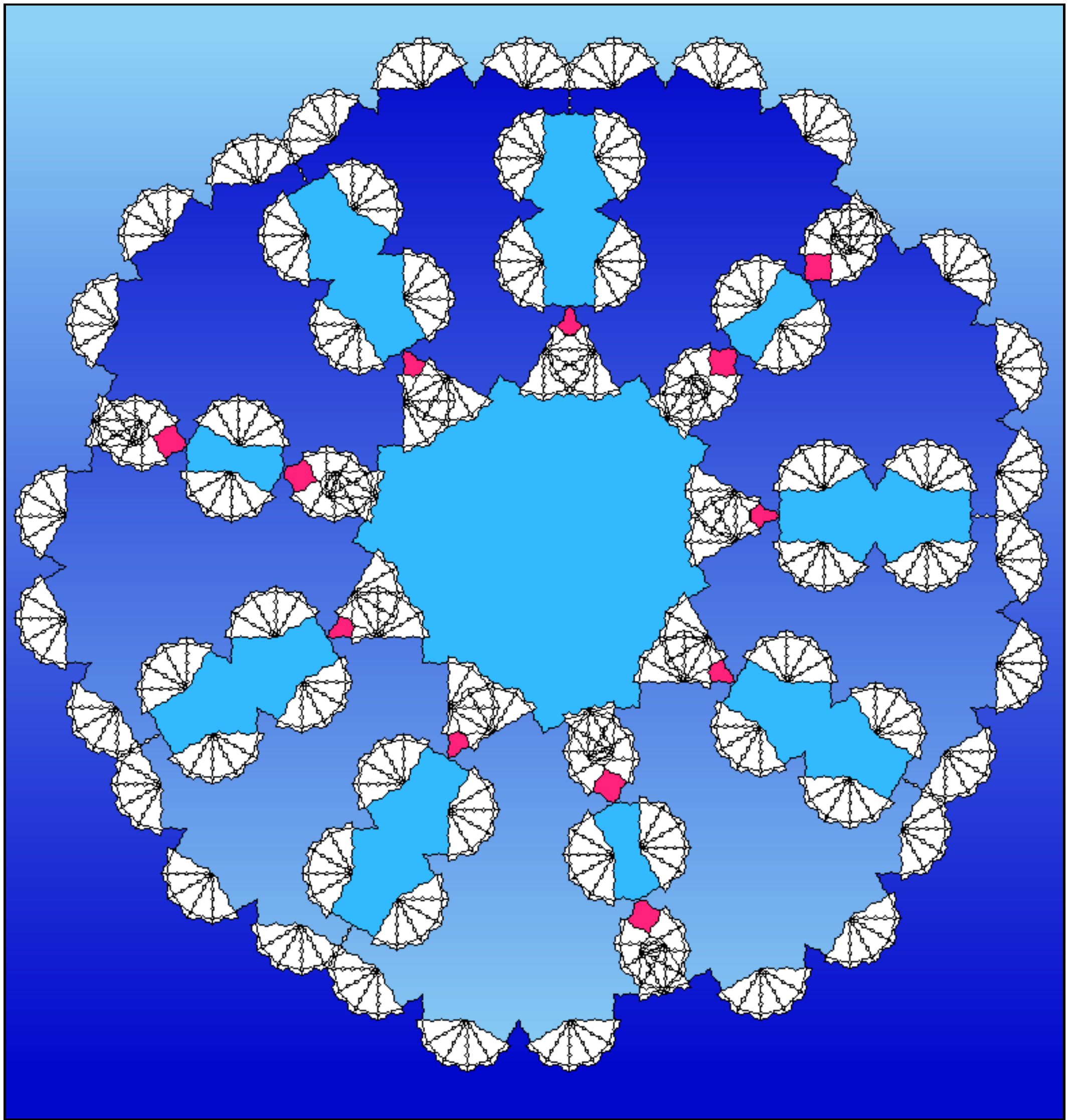
T = V

V = - - - - -

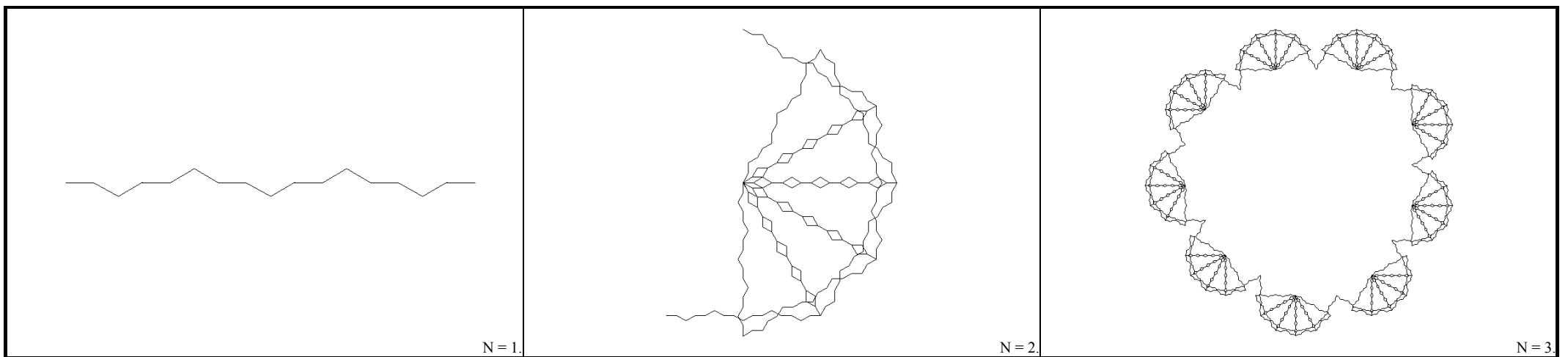
X = + + + + +

Y = - - - - - Z

Z = - - - - -



N=4.



N=1.

N=2.

N=3.

Rad - 12

$\delta = 30^\circ$

A = F

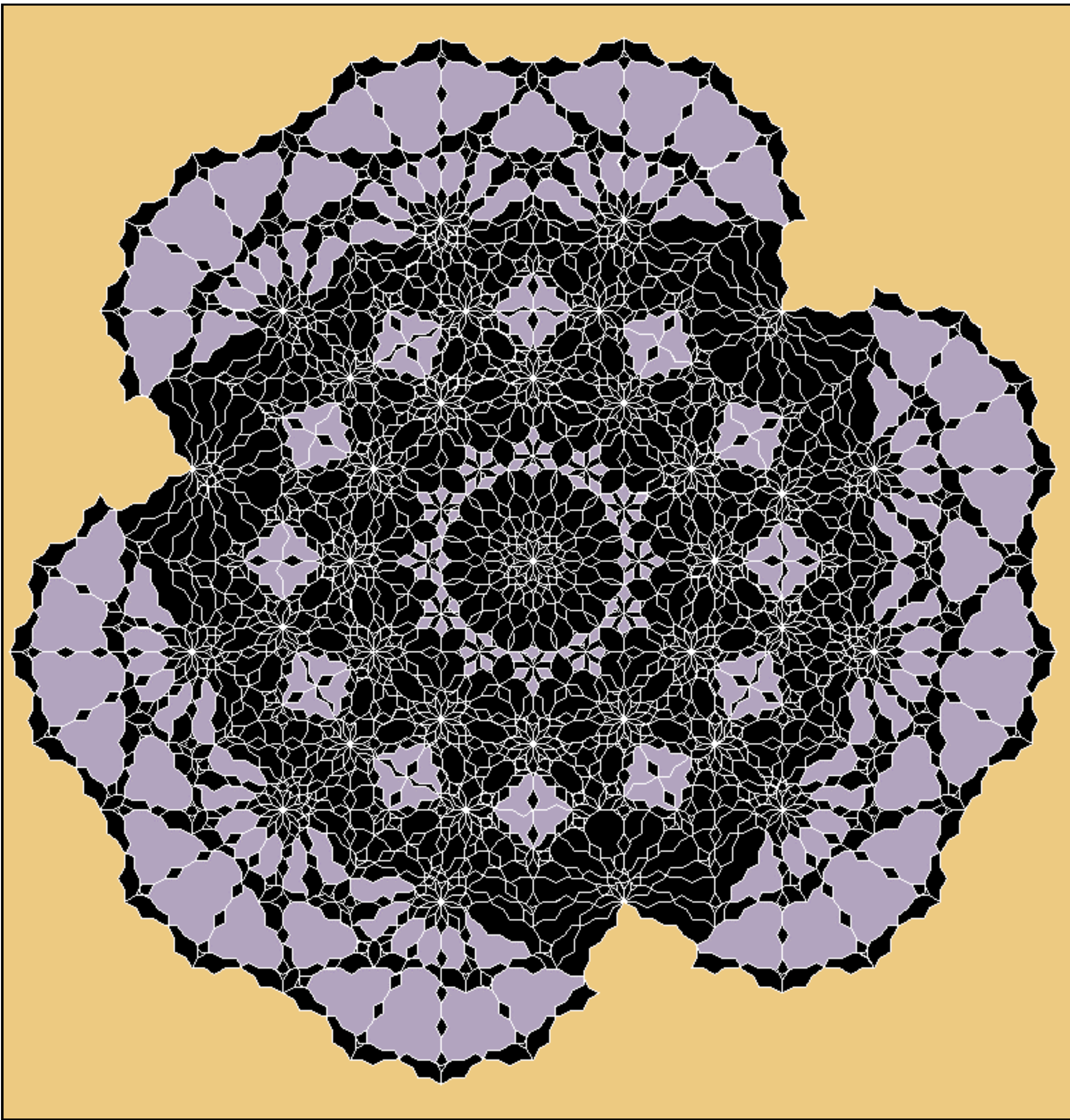
© G. Pernecky, 1994

F \rightarrow FVX-FV++FVX-FV+VFX- -FV+VFX-FV++FVX-FV+VFX- -FV+VFX-FV++FVX- FV

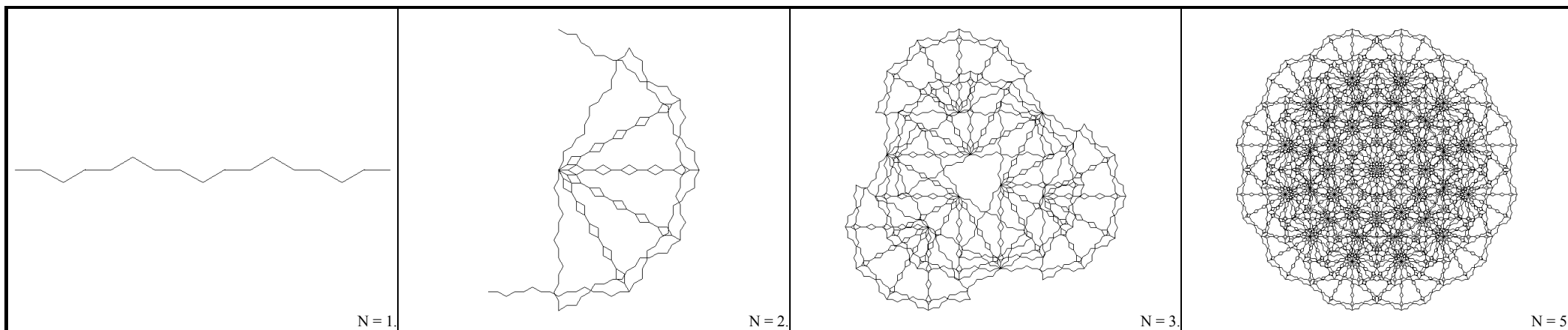
X \rightarrow ++

V \rightarrow ++++Z

Z \rightarrow +



N=4.



N=1.

N=2.

N=3.

N=5.

Big - 12

Rosette. Last N = 5.

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$\delta = 30^\circ$

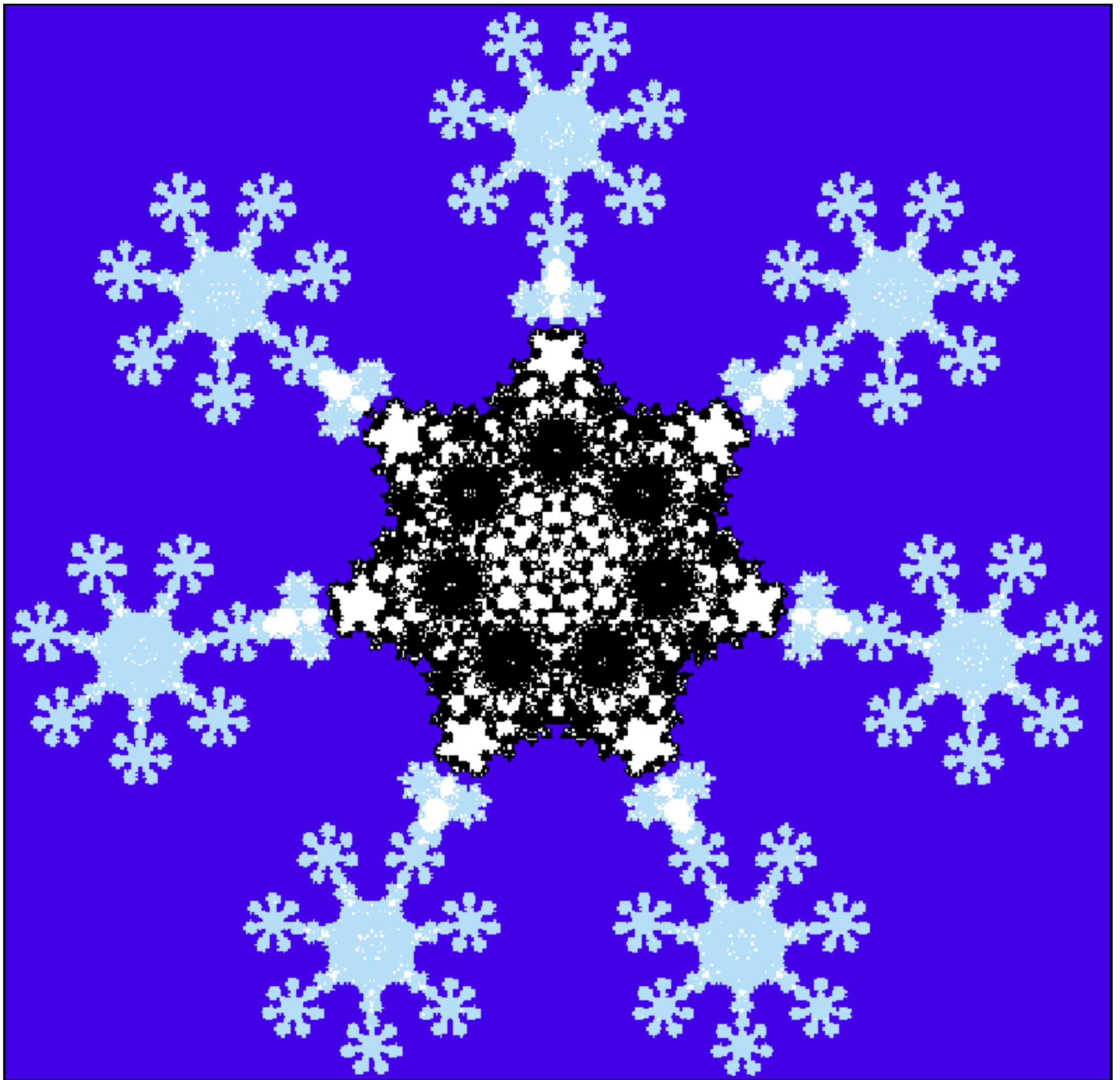
A = F

F \rightarrow FVX-FV++FVX-FV+VXXX- -FV+FVX-FV++FVX-FV+VXXX- -FV+FVX-FV++FVX-FV

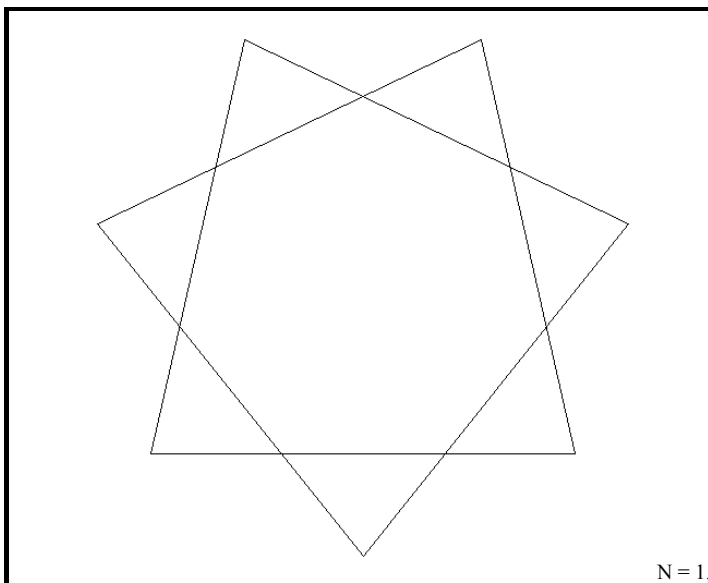
X \rightarrow ++

V \rightarrow +++ Z

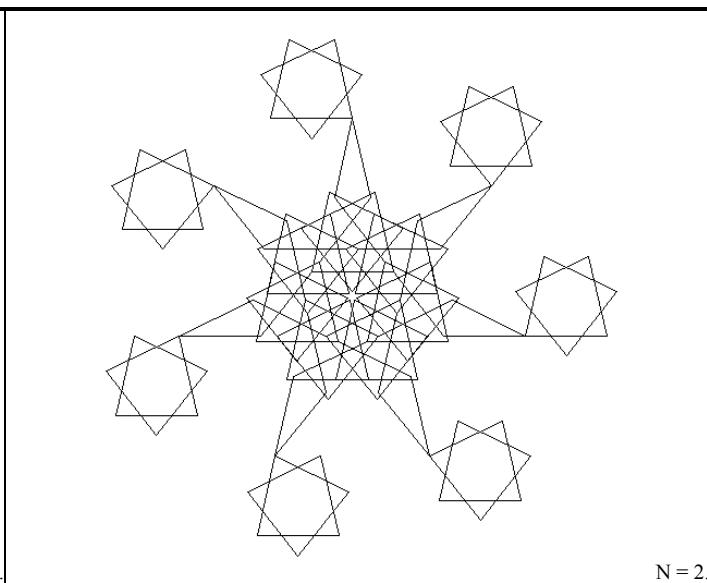
Z \rightarrow +++++



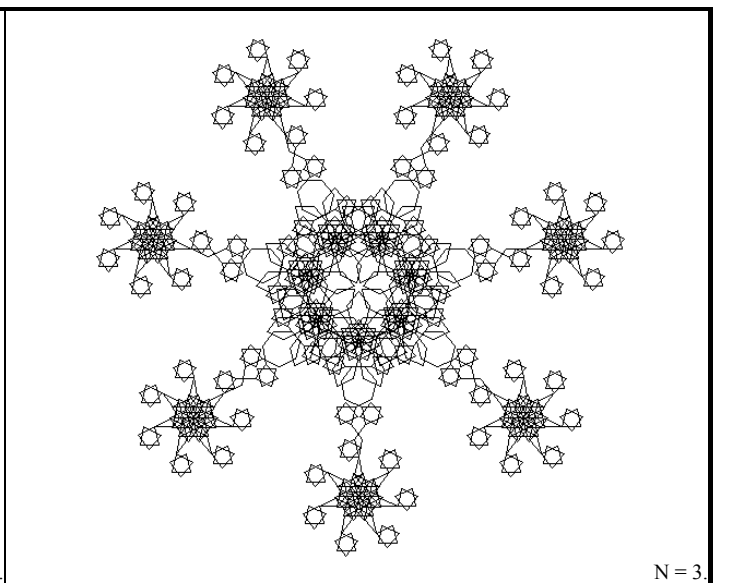
N=5.



N=1.



N=2.



N=3.

Snowflake mutation

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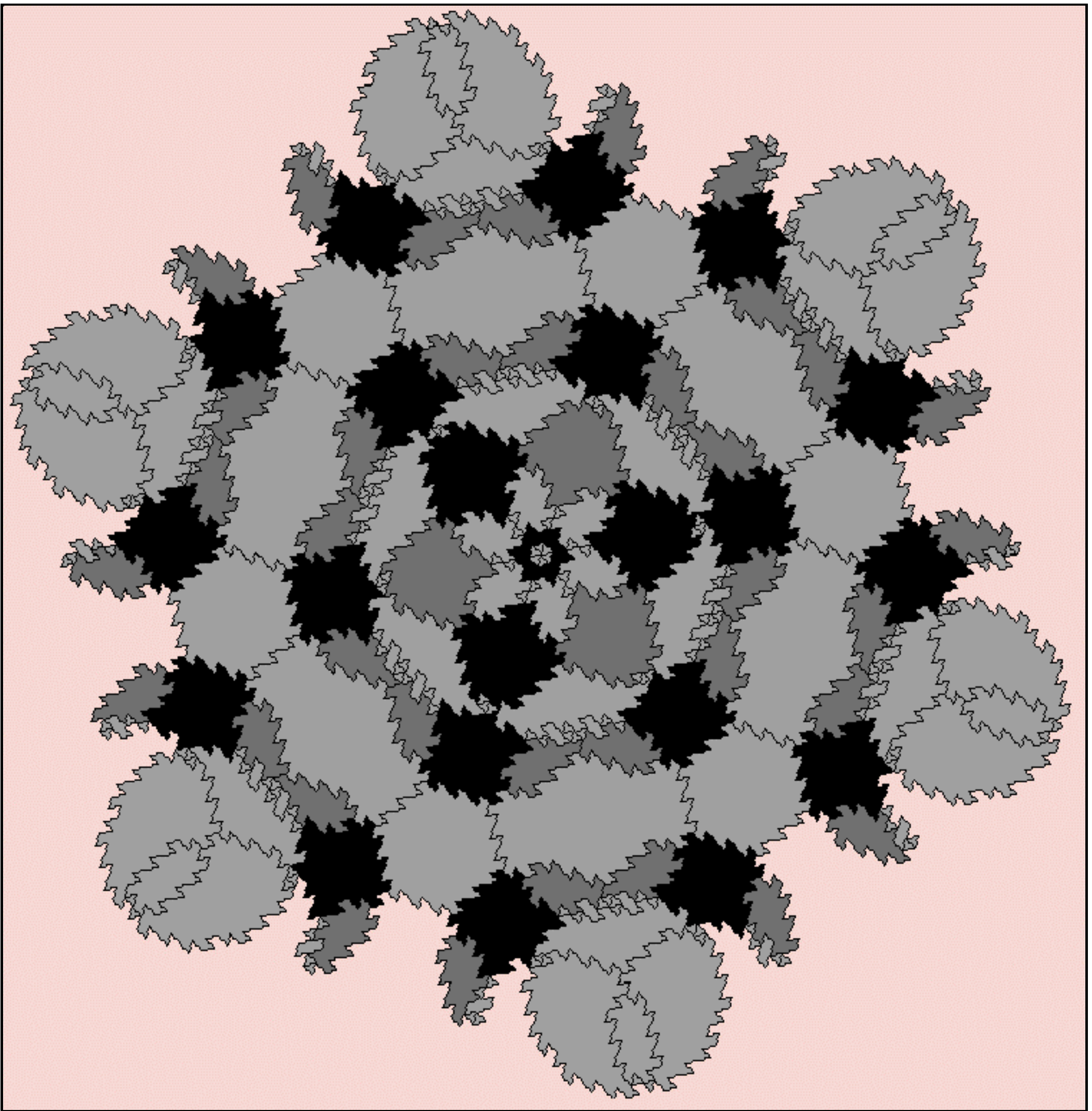
$$\delta = 360 / 7^\circ$$

$$A = X$$

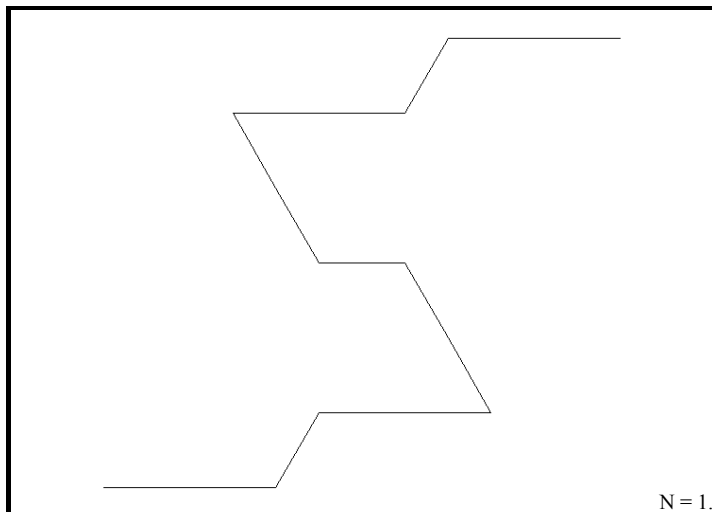
$$F = F-F+F--F--F--F--F--F--F--F+F-F$$

$$X = F|X--F|X--F|X--F|X--F|X--F|X--F|X$$

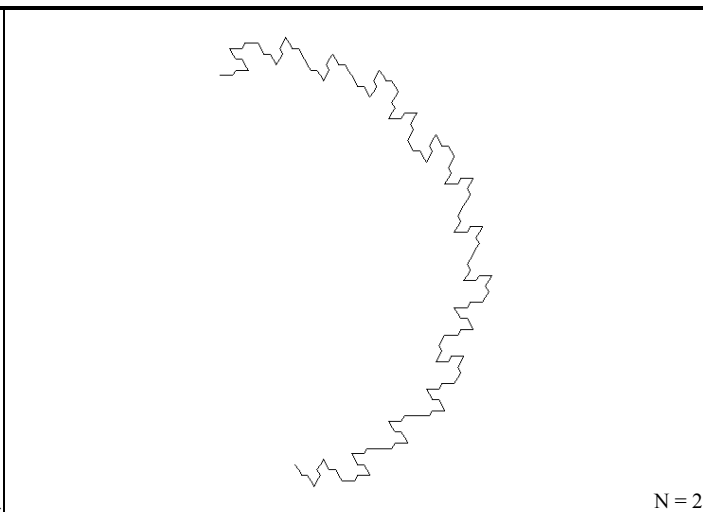
(| = try to turn 180°)



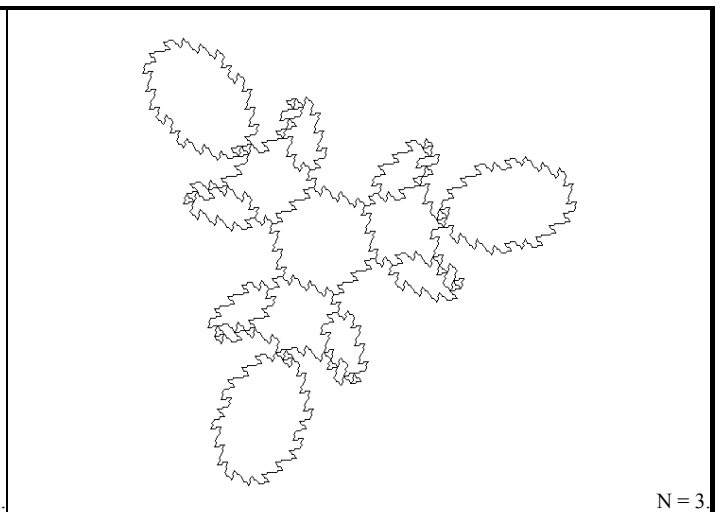
N=4.



N=1.



N=2.



N=3.

Rosette 6 - 5

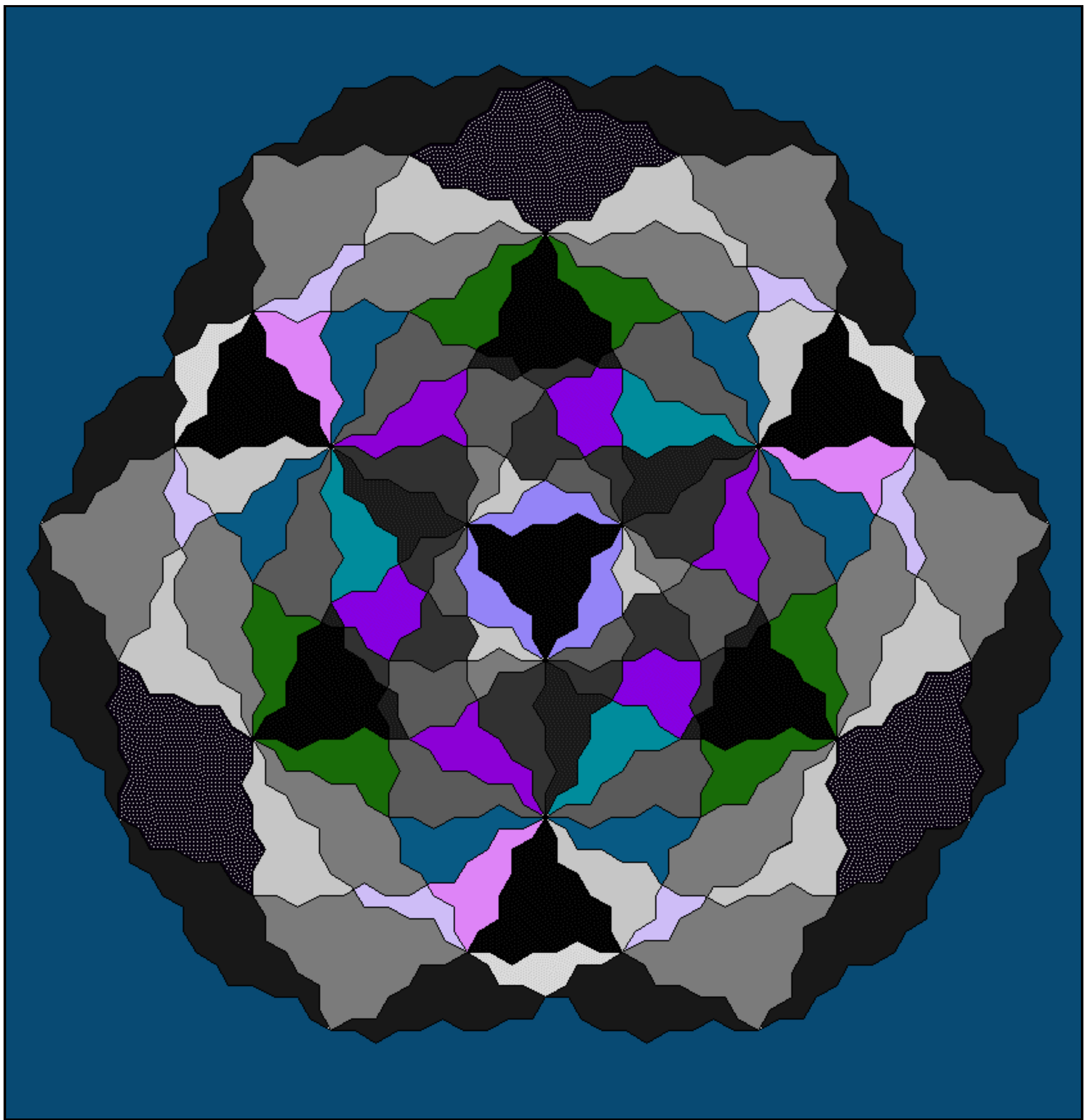
Last N = 4
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$$\delta = 60^\circ$$

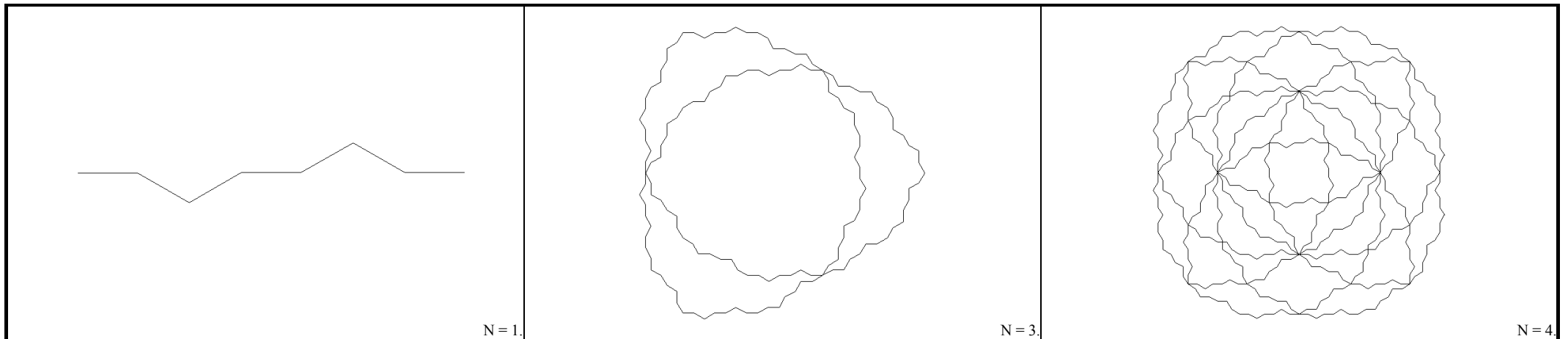
$$A = F$$

$$F \rightarrow FF + FX - FF ++ FF + FX - FFXX -- FF + FX - FF -$$

$$X \rightarrow ++$$



N=5.



N=1.

N=3.

N=4.

Rose / Web

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$\delta = 30^\circ$

A = F

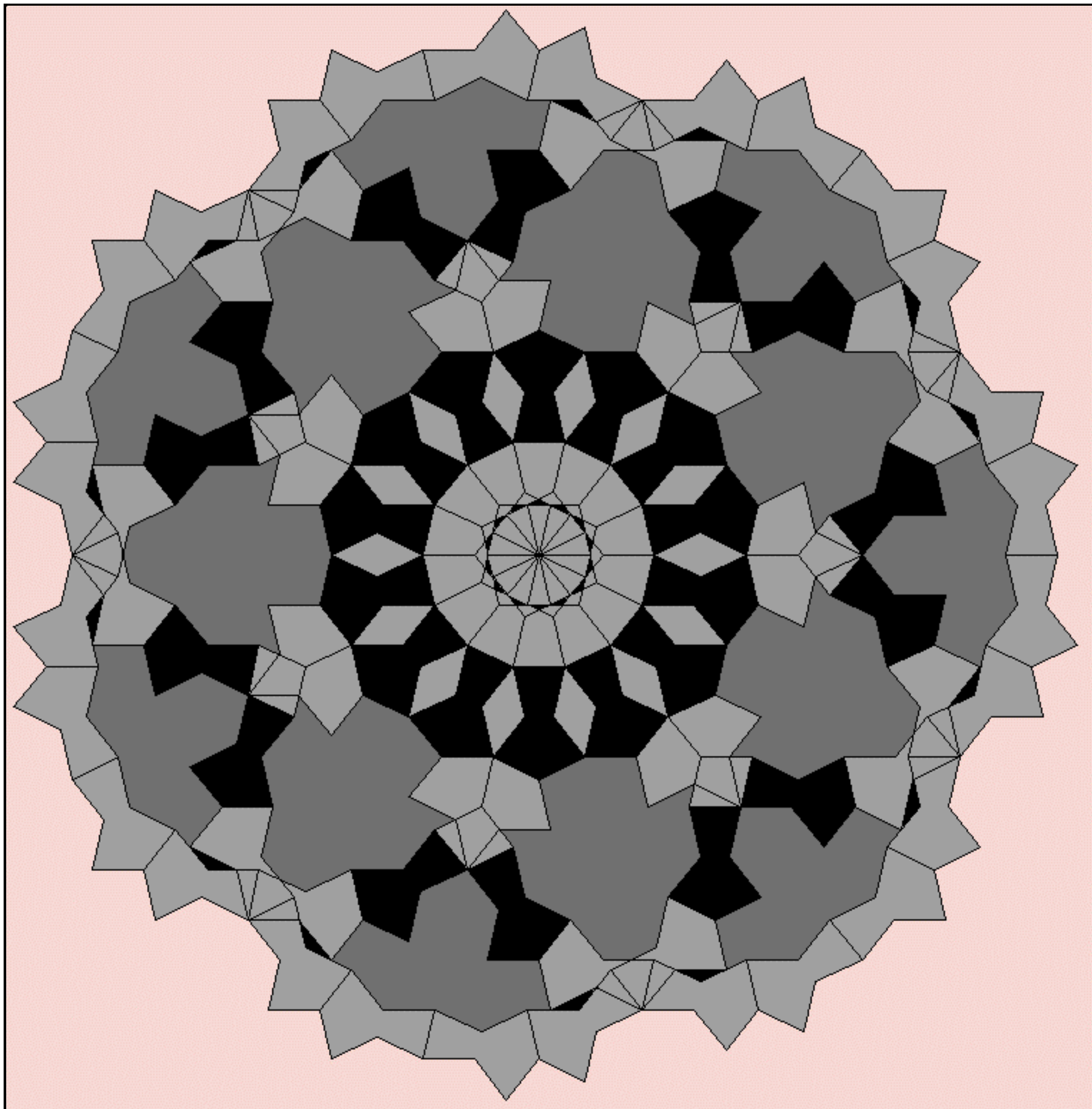
F \rightarrow FXK - FVK ++FXK - FK + FXXVK -- FK + FK

X \rightarrow ++

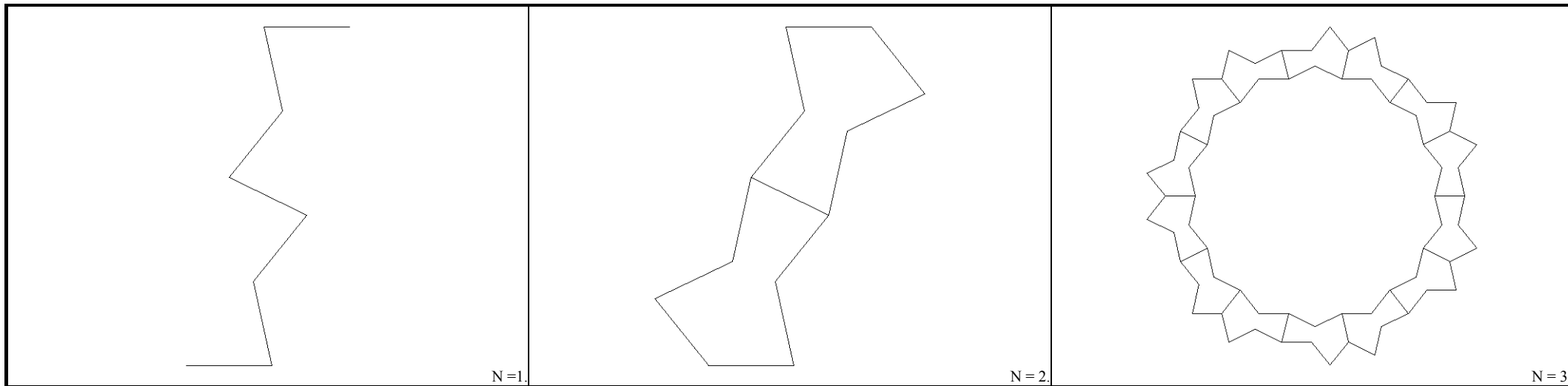
V \rightarrow -

K \rightarrow L

L \rightarrow +



N=5.



N=1.

N=2.

N=3.

Rosette 7 - 1

Last N = 5
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$\delta = 360 / 7^\circ$

A = F

F → FVK ++ FXK - FVK ++ FXXVK -- FK + FXXVK -- FKY !

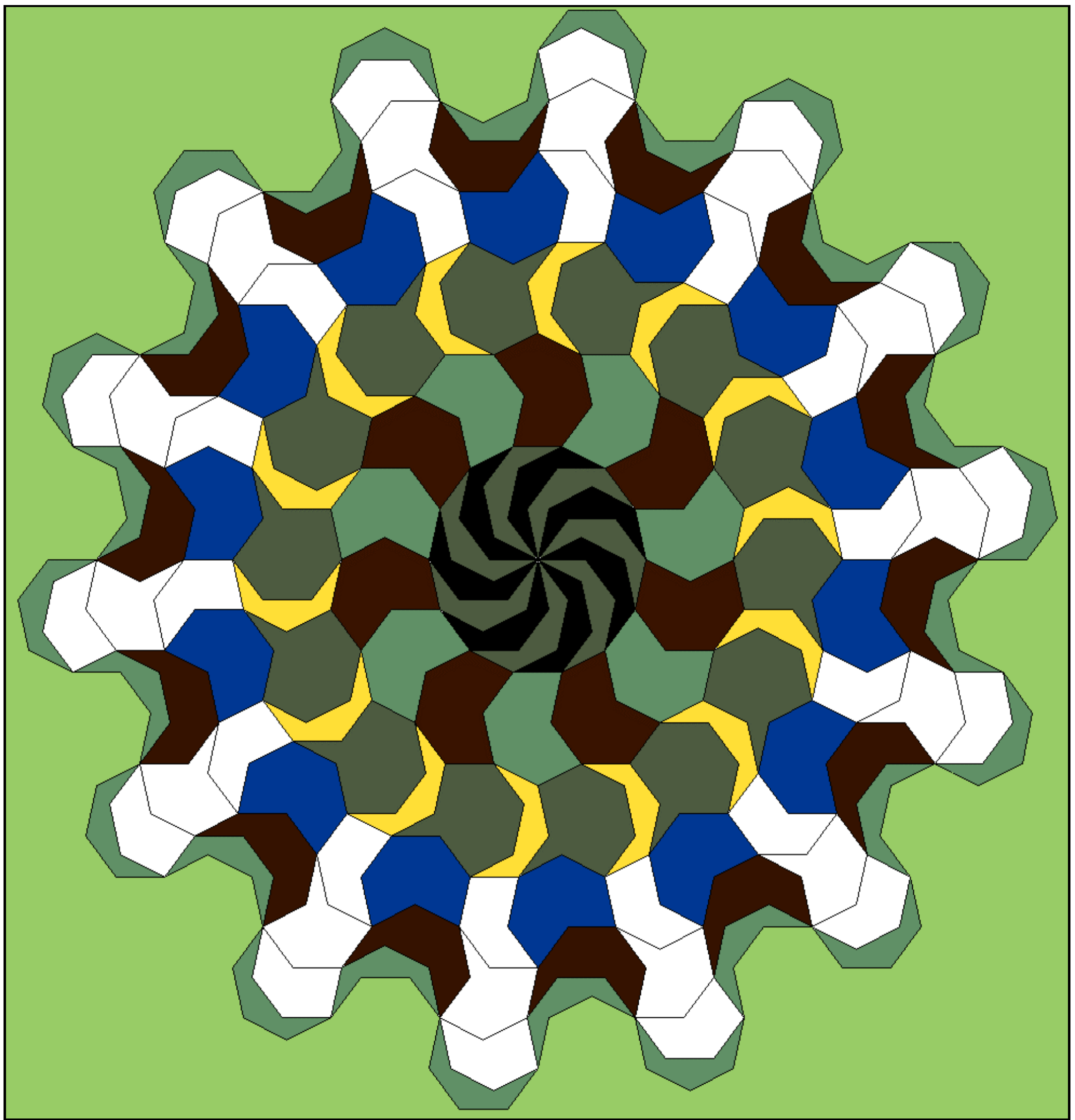
(! = reverse directions: +-)

X → ++

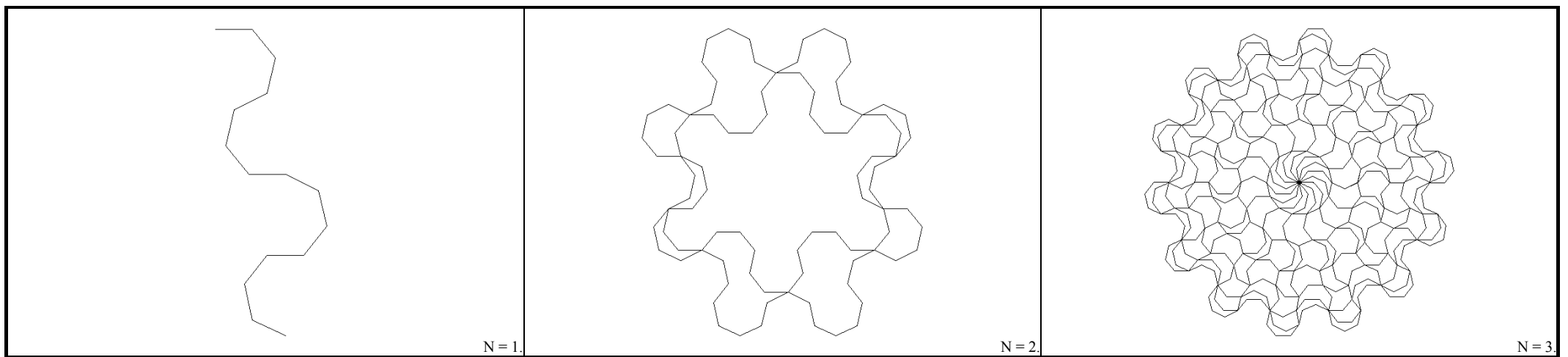
V → -

K → L

L → --



N=3.



N=1.

N=2.

N=3.

Rosette 14 A - 2

Last N = 3

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$\delta = 360 / 14^\circ$

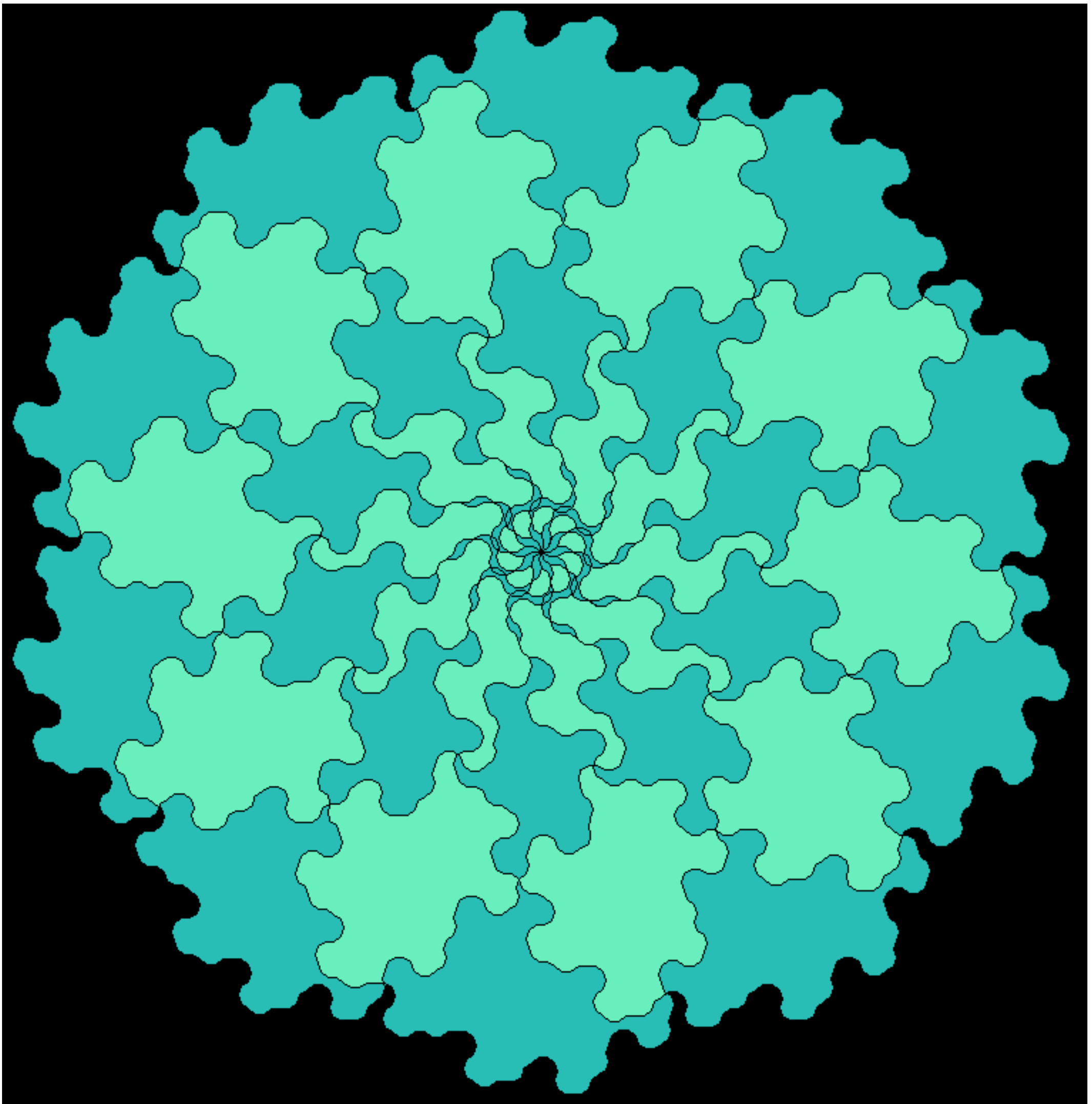
A = F - F

F → YFX -- FX -- FX -- F ++ F ++ F ++ FY

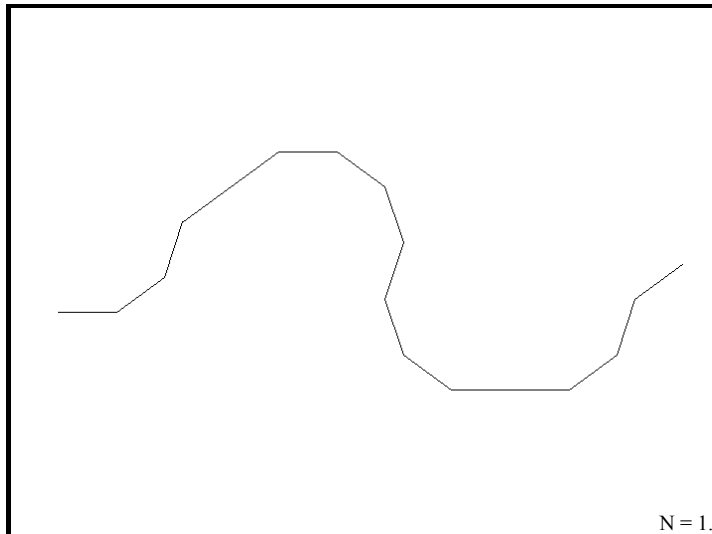
X → ++++

Y → !Z

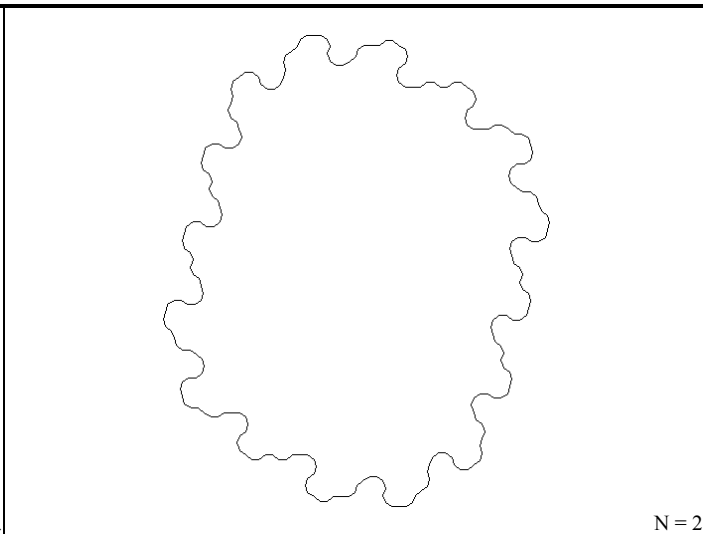
Z → ----



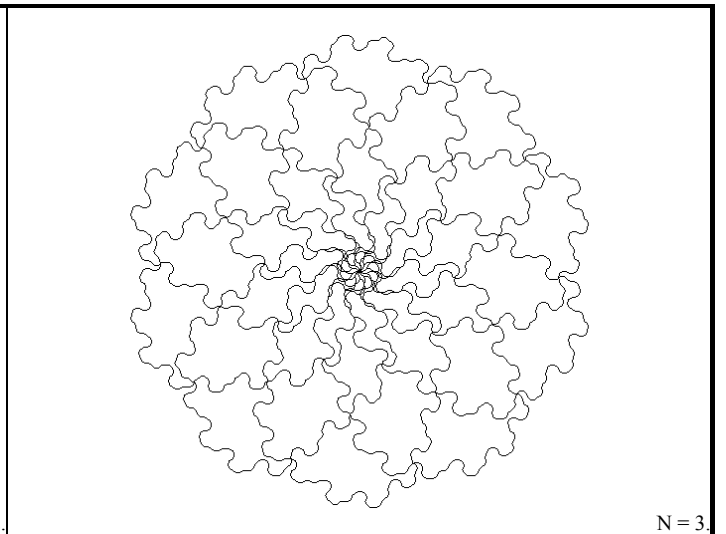
N=3.



N=1.



N=2.



N=3.

Rosette 10 - 4

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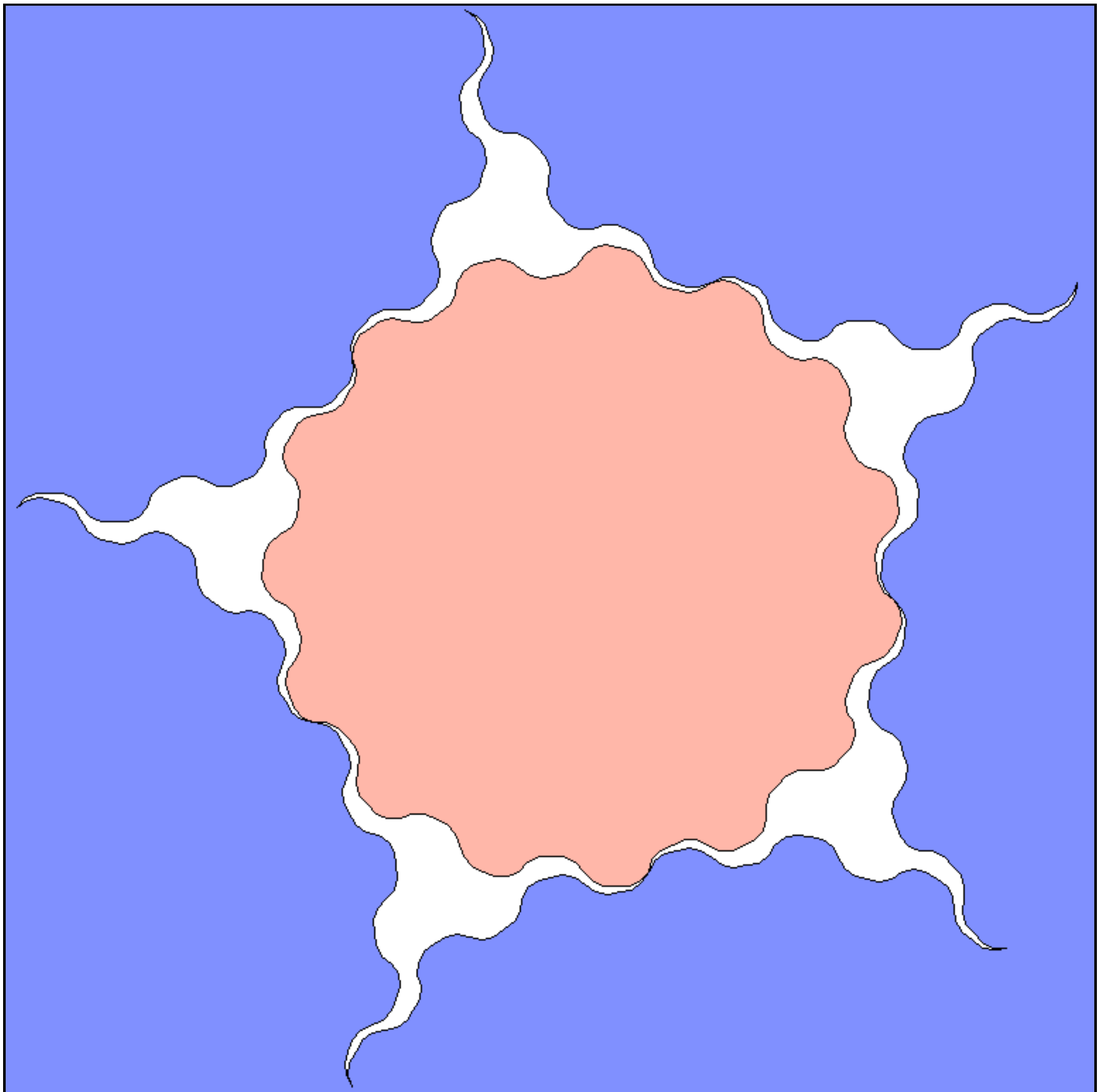
$\delta = 36^\circ$

A = F

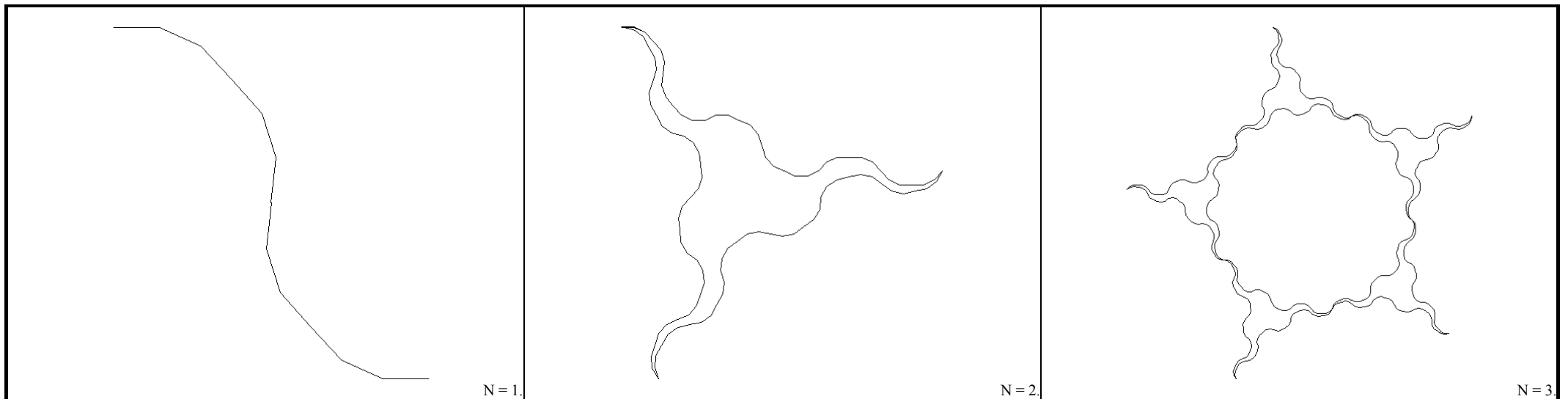
F \rightarrow F+F+FYX-FFX-FX-FYX-FX-F+F+FY+FF+F+FYX-FX-

X \rightarrow ++

Y \rightarrow -



N=3.



N=1.

N=2.

N=3.

Rosette 15 - 1

Last N = 3

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$$\delta = 24^\circ$$

$$A = F$$

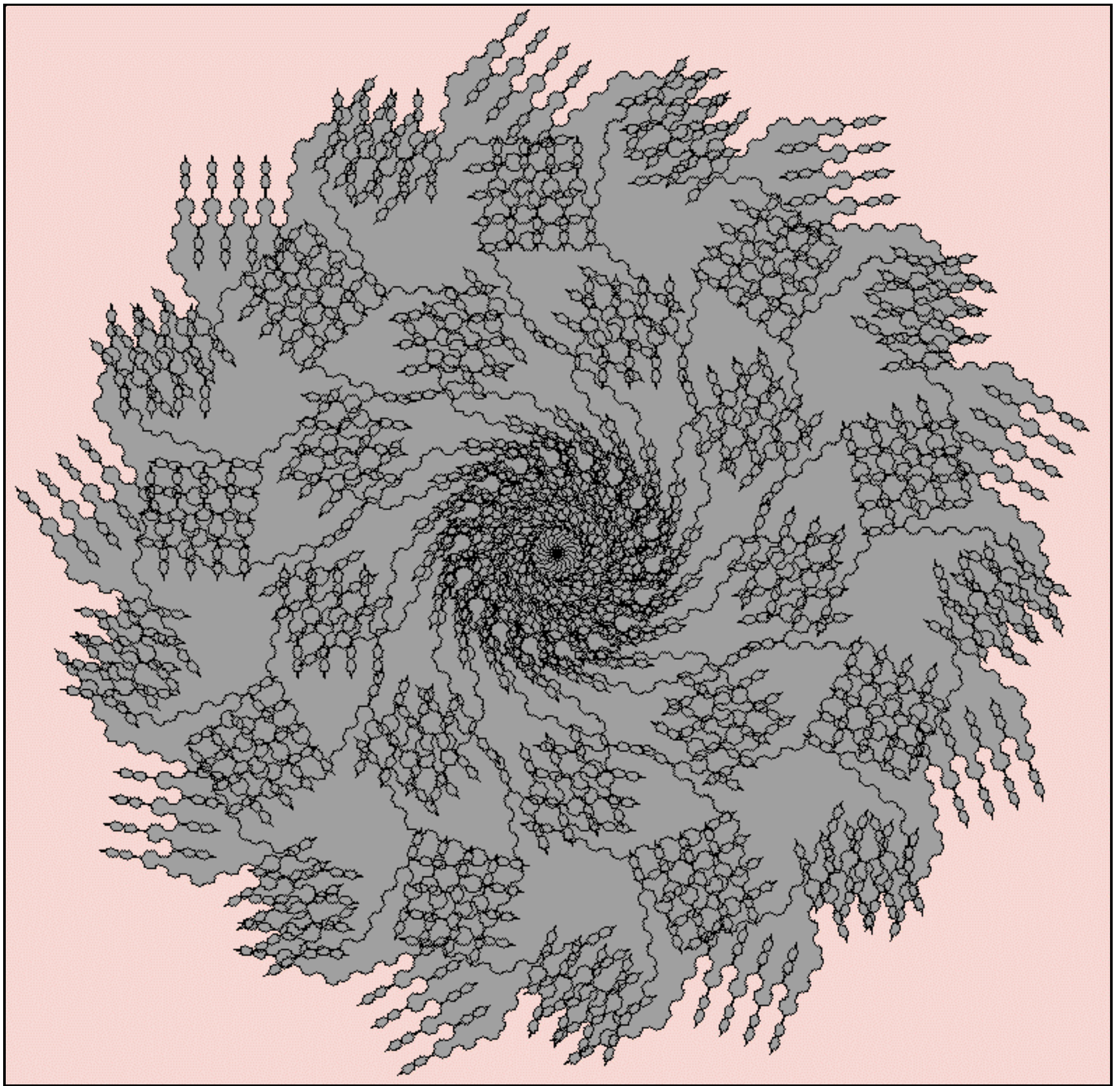
$$F \rightarrow FX - FX - FYFX - FX - FYF + F + FYF + F + F$$

$$X \rightarrow ++$$

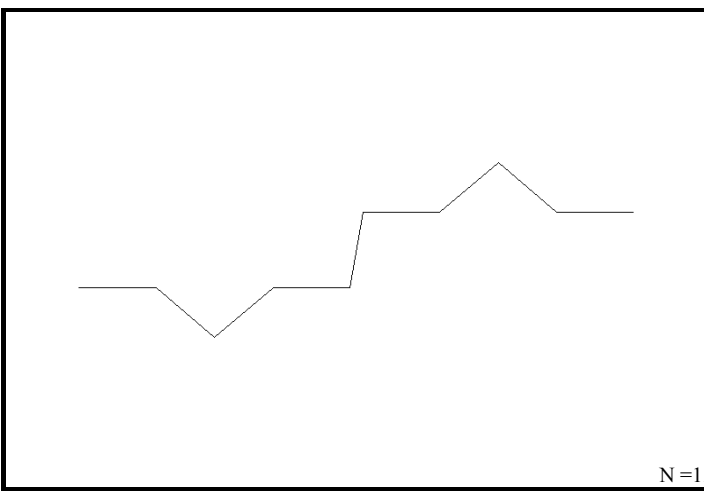
$$Y \rightarrow |Z$$

$$Z \rightarrow |$$

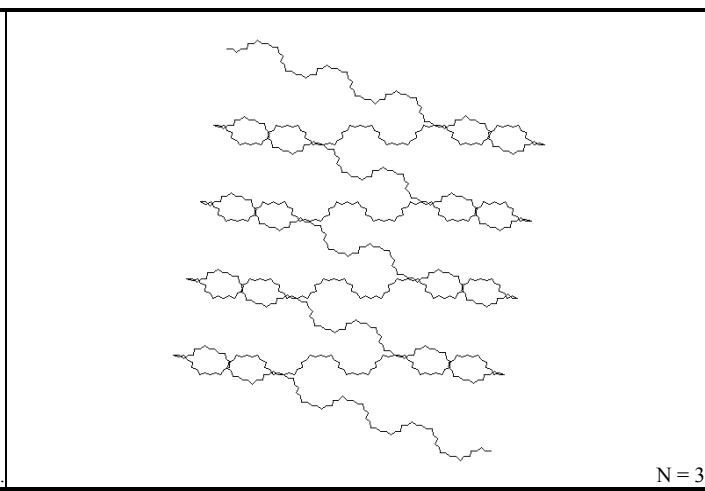
(| = try to turn 180°)



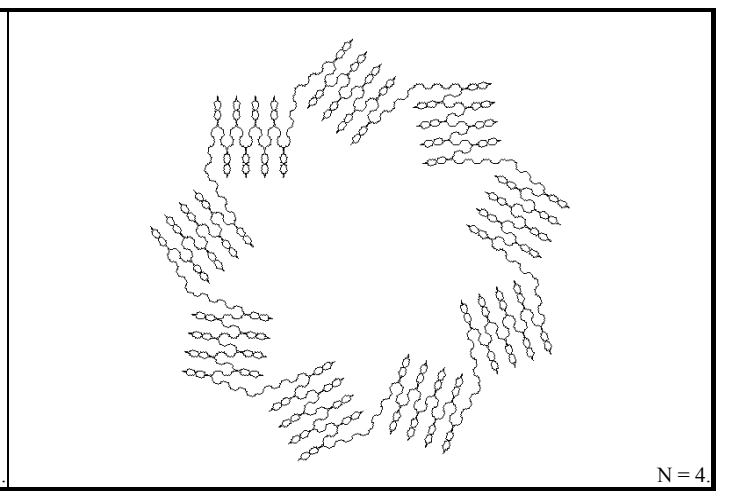
N=5.



N=1.



N=3.



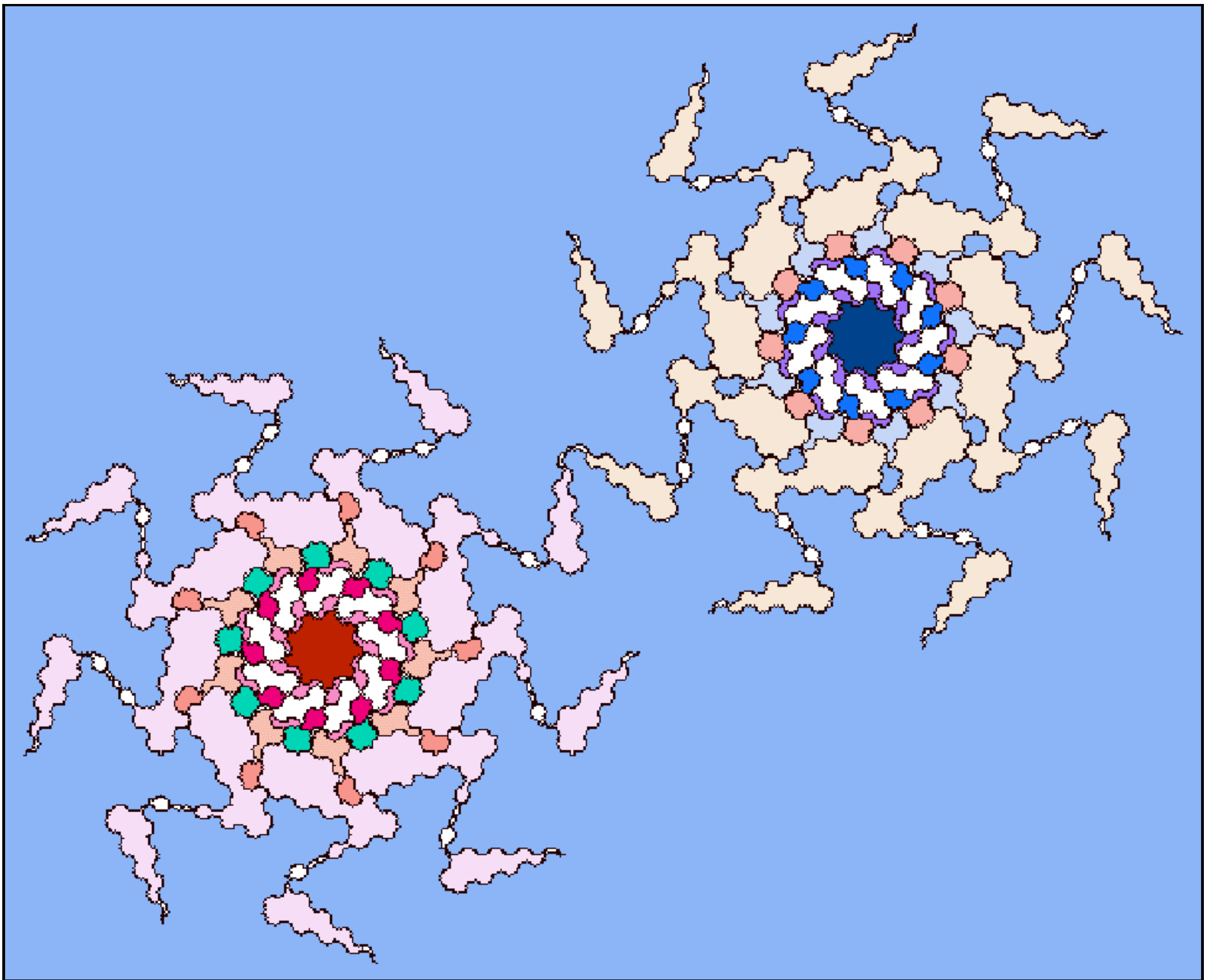
N=4.

Nine -2

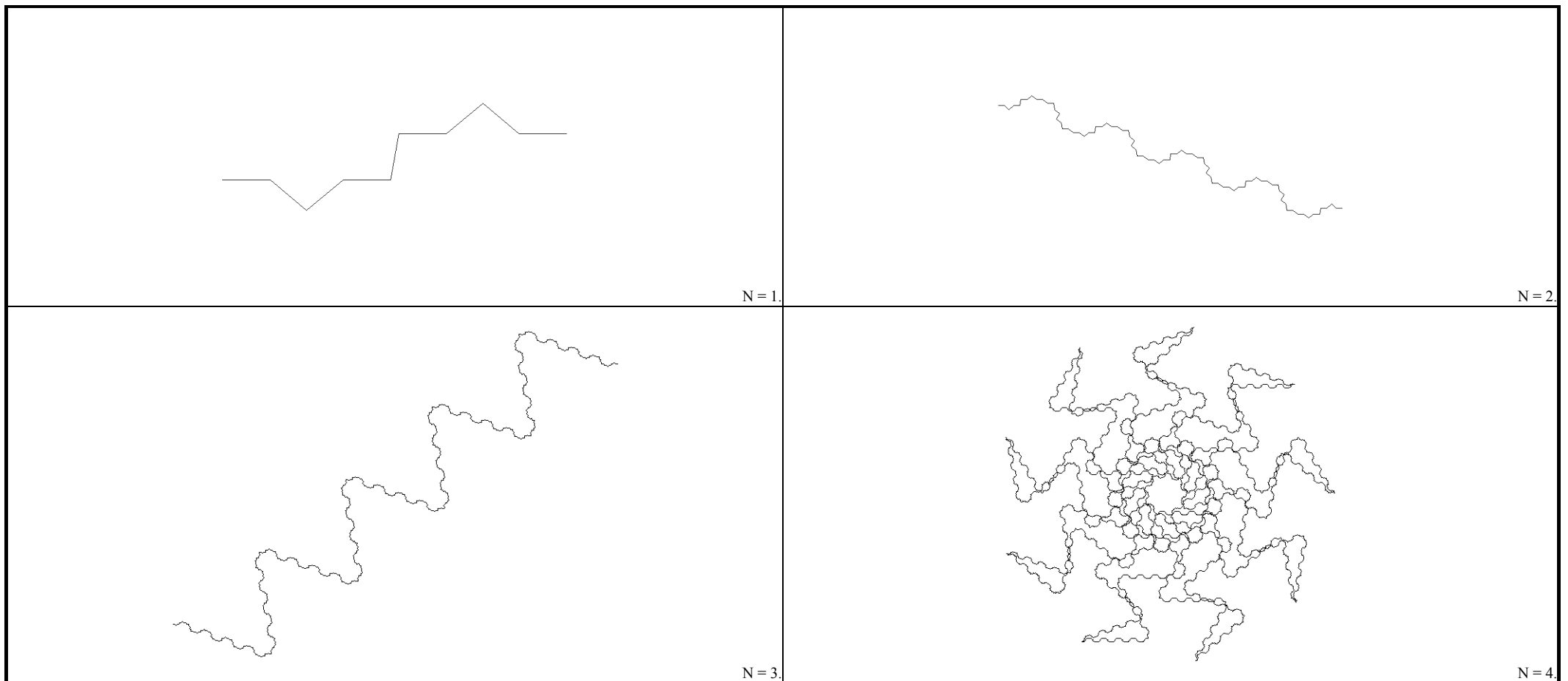
Rosette. Last N = 5
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$\delta = 40^\circ$
 $A = F$
 $F \rightarrow F X K - F V K ++ F X K - F V K ++ F X X V K -- F K + F X X V K -- F K + F K Y !$
 (! = reverse directions: +, -)

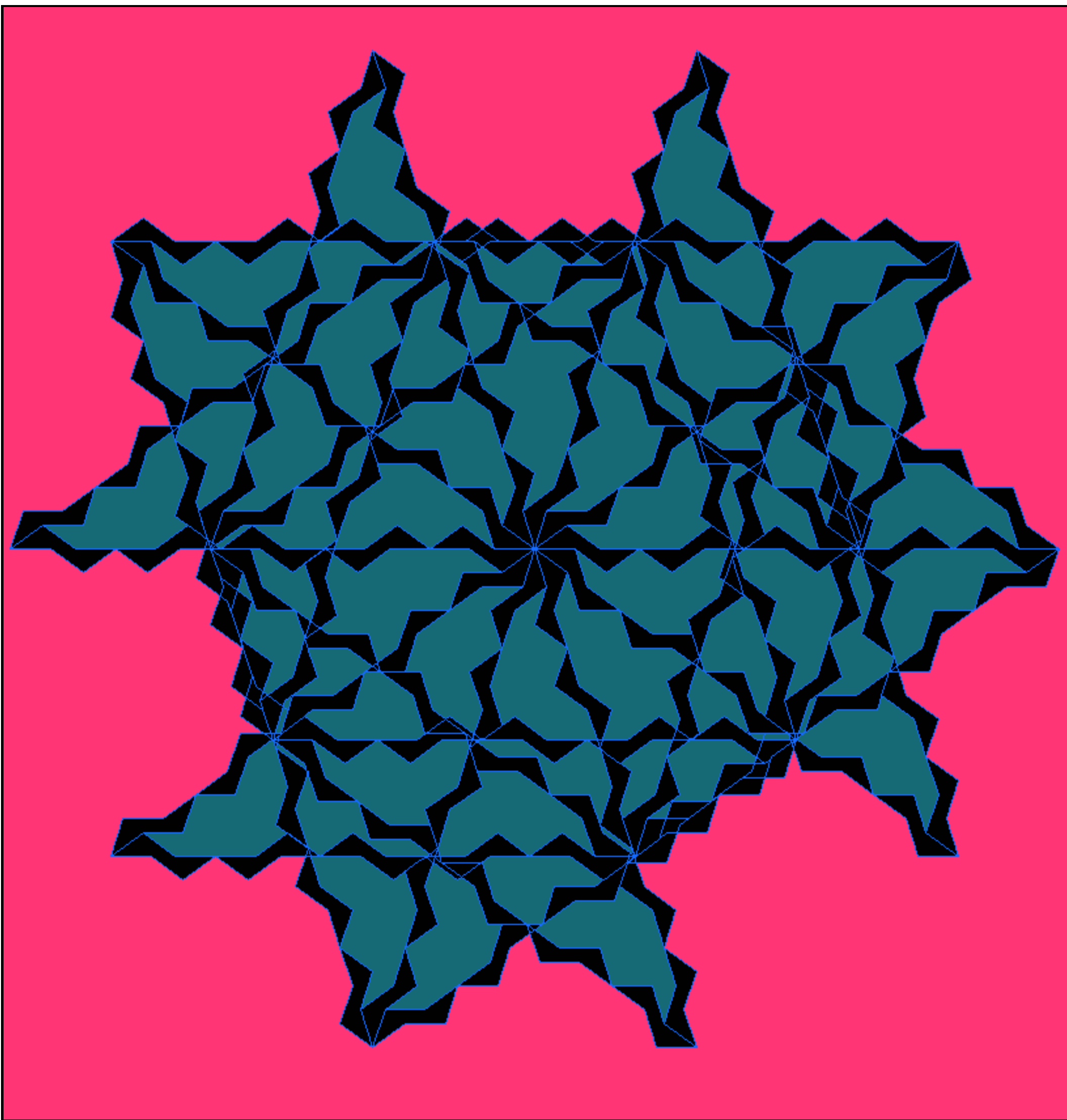
$X \rightarrow ++$
 $Y \rightarrow ! Z ++$
 $V \rightarrow -$
 $Z \rightarrow -- ! -- W$
 $W \rightarrow -- !$
 $K \rightarrow L$
 $L \rightarrow ---$



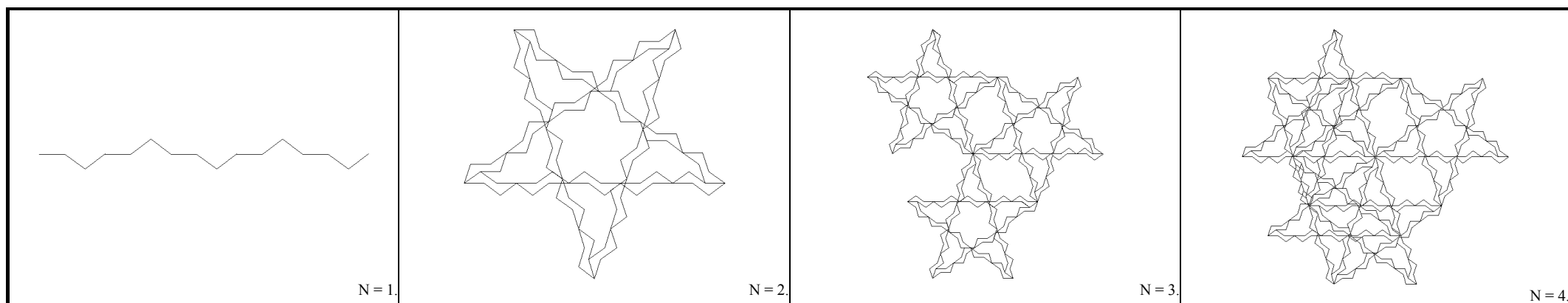
N = 5.



<p>Nine - 3</p> <p>Rosette. Last N = 5</p> <p>© G. Pernecky, 1994</p>	<p>$\delta = 40^\circ$</p> <p>A = F</p> <p>F \rightarrow FXK- FVK++FXK- FVK++FXXVK- - FK+FXXVK- - FK+FKY!</p> <p>(! = reverse directions: +, -)</p>	<p>X \rightarrow ++</p> <p>T \rightarrow V</p> <p>V \rightarrow -</p>	<p>K \rightarrow L</p> <p>L \rightarrow -</p> <p>Y \rightarrow ! Z ++</p> <p>Z \rightarrow - - - - - !</p>
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N = 5.



N = 1.

N = 2.

N = 3.

N = 4.

Pseudo-Rosette (Ro -10 - 6)

$\delta = 36^\circ$

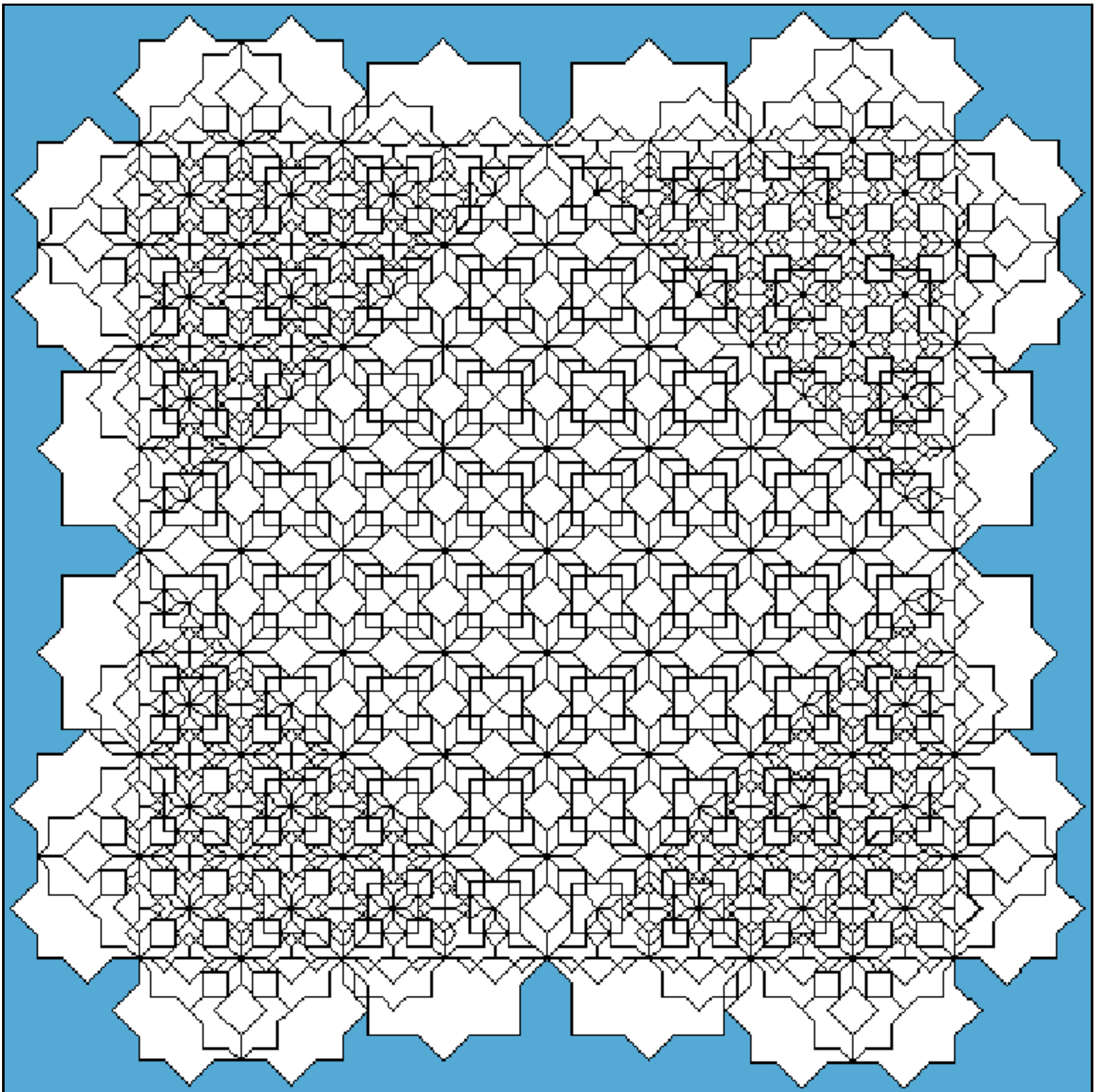
A = F

F \rightarrow FVX- FV++FVX - FV+FVXX -- FV+FVX - FV++FVX- FV+FVXX -- FV+FVX - FV++FV

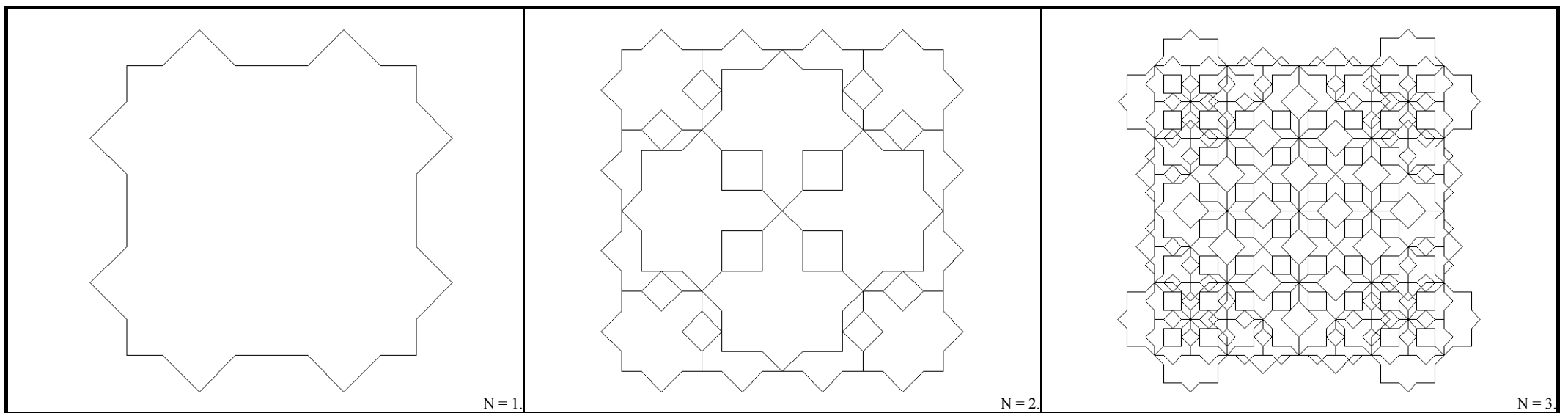
X \rightarrow ++

V \rightarrow +++

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N=4.



N=1.

N=2.

N=3.

Pythagoras -1

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$$\delta = 45^\circ$$

$$A = FFFF$$

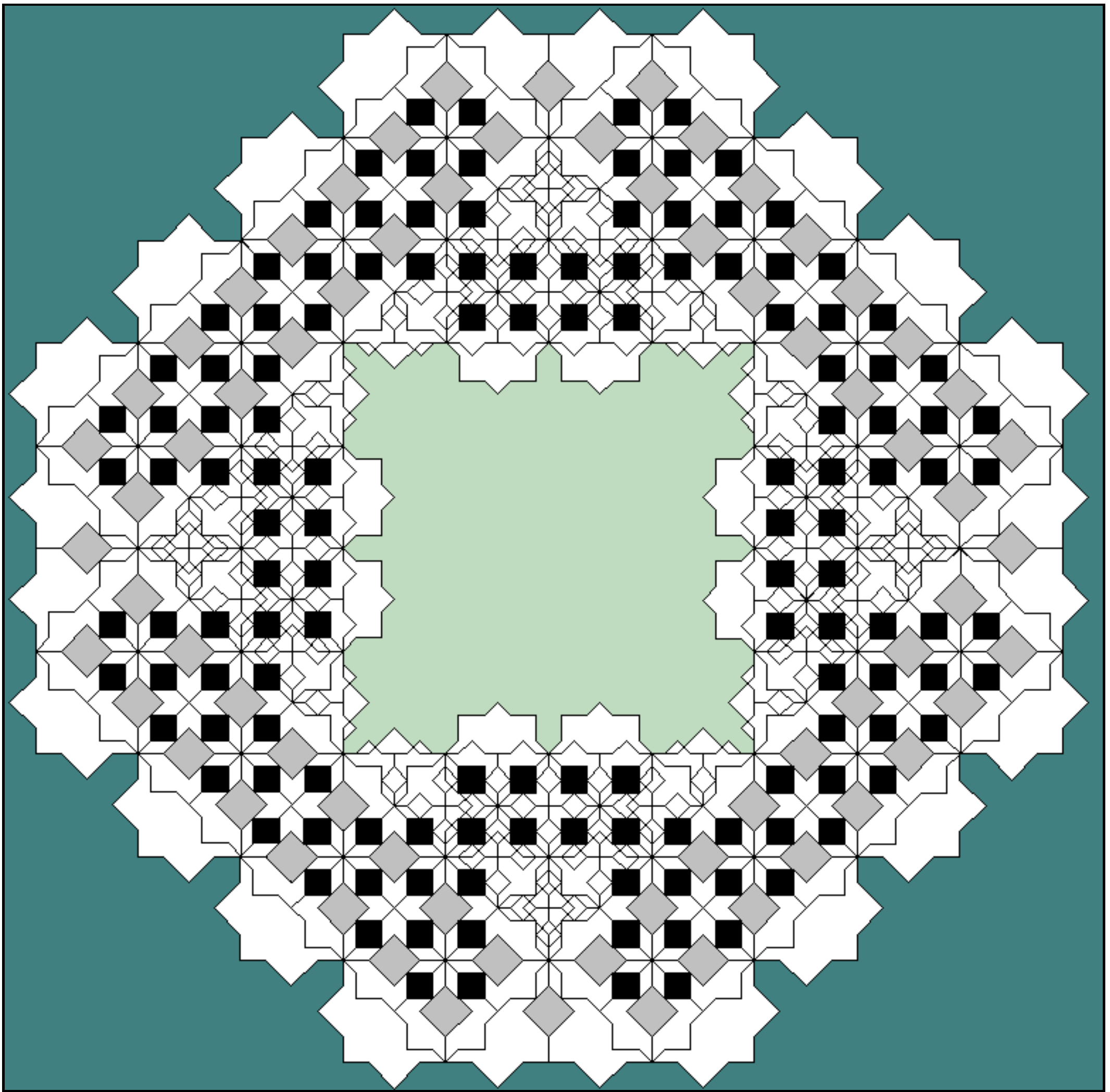
$$F \rightarrow F + (\sqrt{2}F) - - (\sqrt{2}F) + F - - F + (\sqrt{2}F) - - (\sqrt{2}F) + F$$

(Fractint code:)

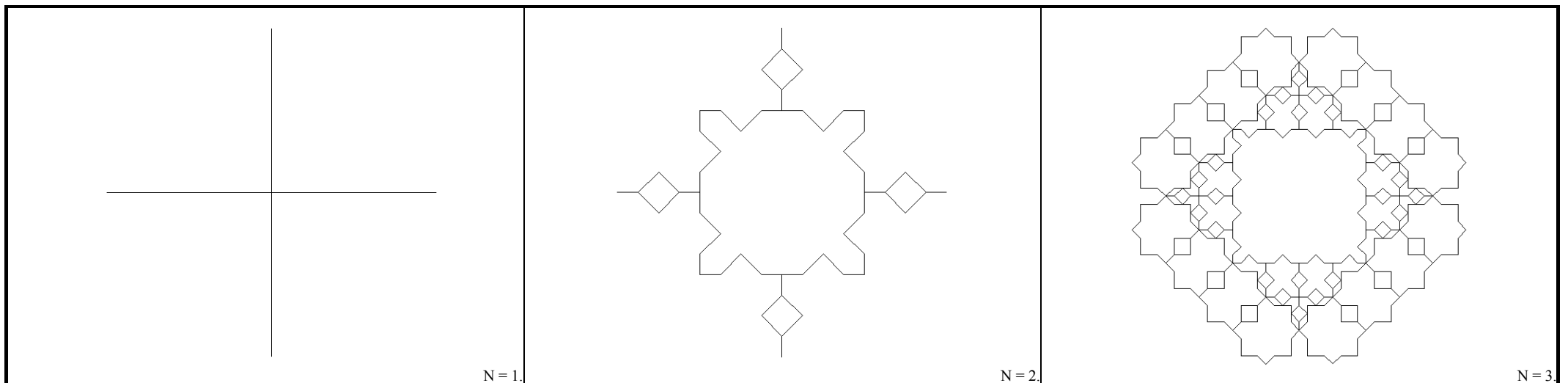
Angle 8

Axiom FFFF

$$F = F + @ Q2F - - F + @ iQ2F - - F + @ Q2F - - F + @ iQ2F + F$$



N = 4.



N = 1.

N = 2.

N = 3.

Pythagoras -10

$\delta = 45^\circ$

A = X ++ X ++ X ++ X ++

F \rightarrow F + ($\sqrt{2}$ F) -- ($\sqrt{2}$ F) + F -- F + ($\sqrt{2}$ F) -- ($\sqrt{2}$ F) + F

X \rightarrow F - - - - F

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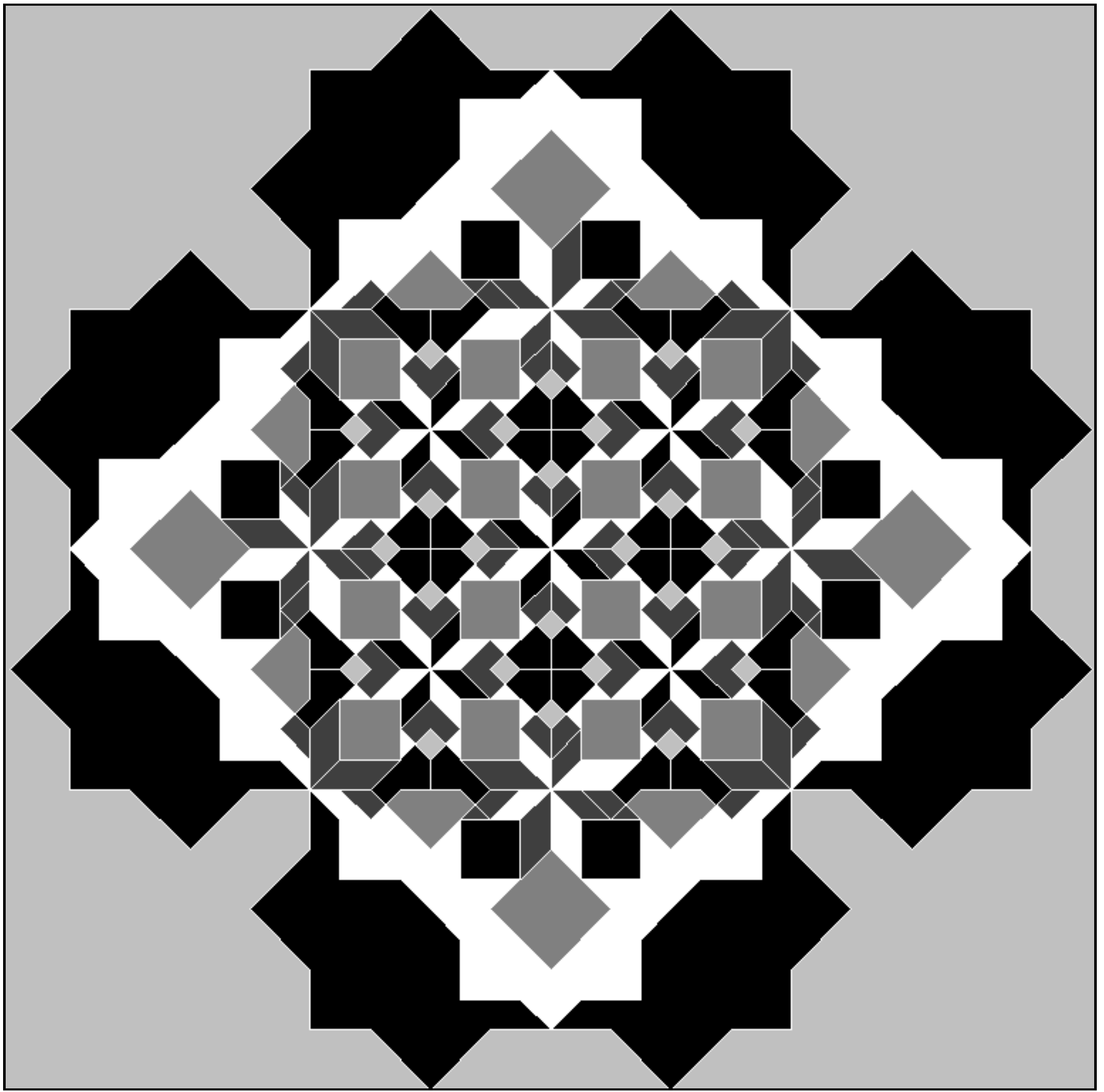
(Fractint code:)

Angle 8

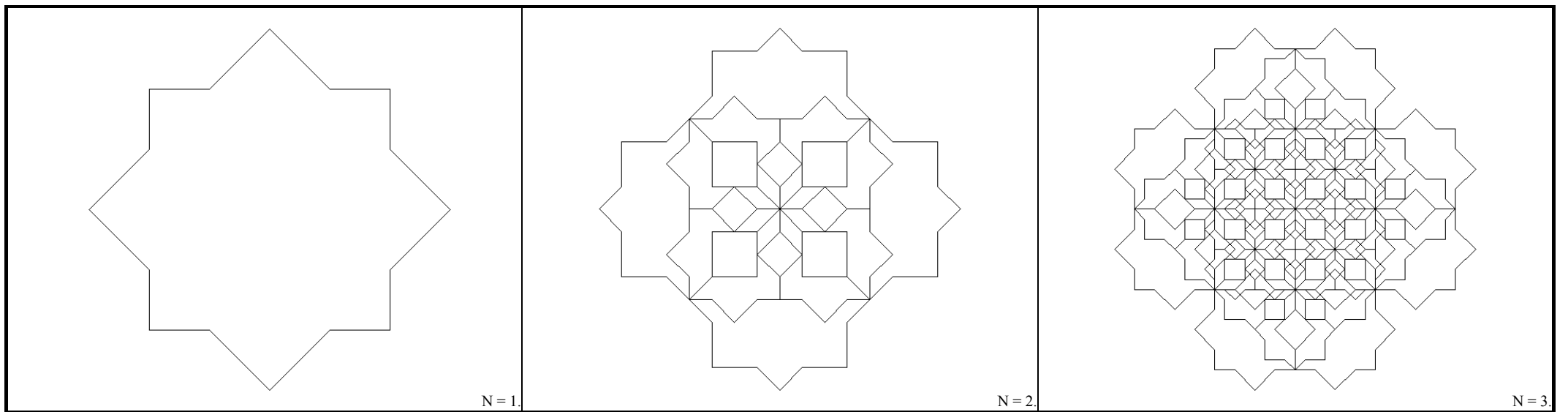
Axiom X ++ X ++ X ++ X ++

F = F + @ Q2F -- F + @ iQ2F -- F + @ Q2F -- F + @ iQ2F + F

X = F - - - - F



N = 3.



N = 1.

N = 2.

N = 3.

Pythagoras -11

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$\delta = 45^\circ$

A = F -- F

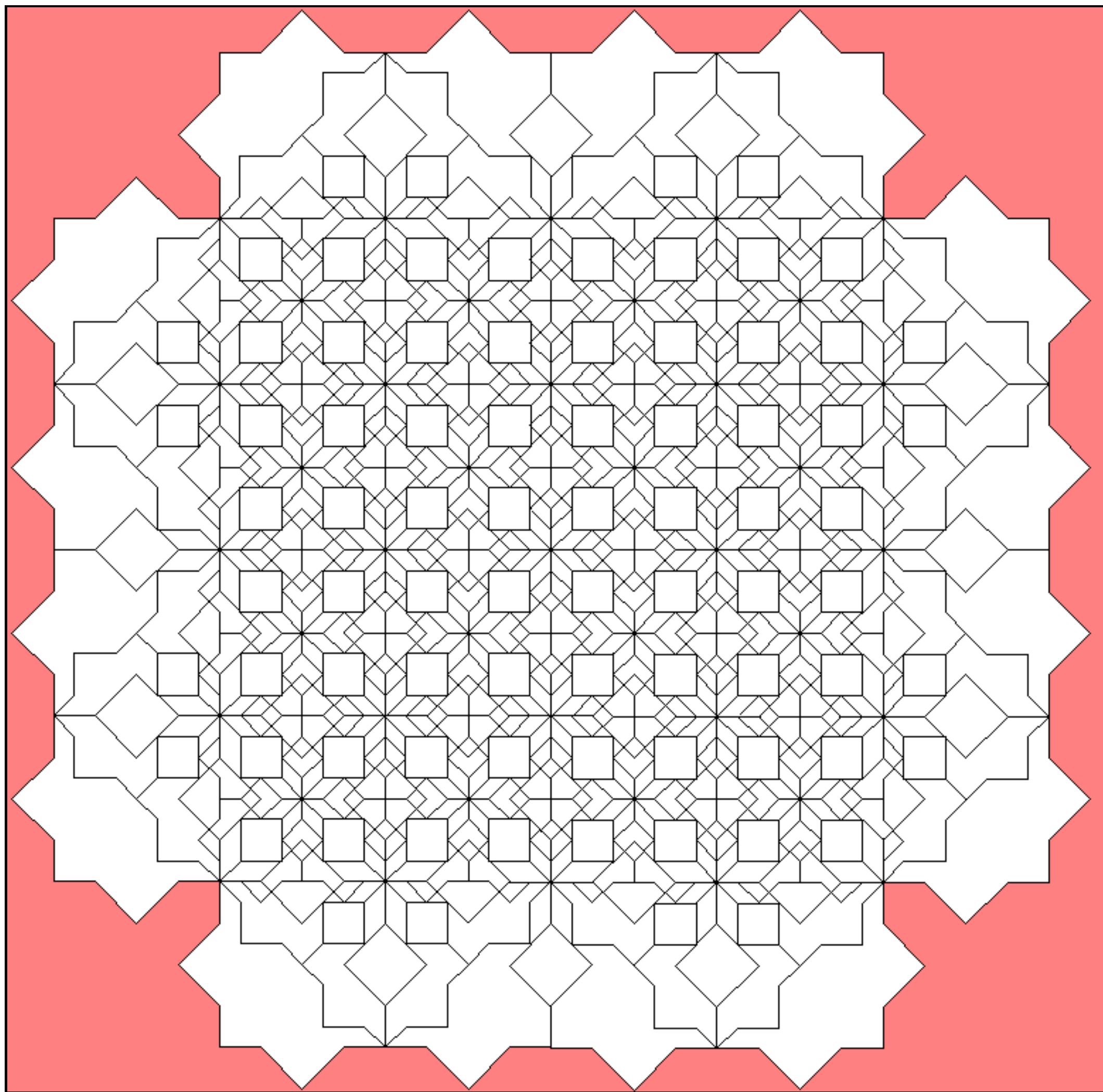
F → F + ($\sqrt{2}F$) -- ($\sqrt{2}F$) + F -- F + ($\sqrt{2}F$) -- ($\sqrt{2}F$) + F

(Fractint code:)

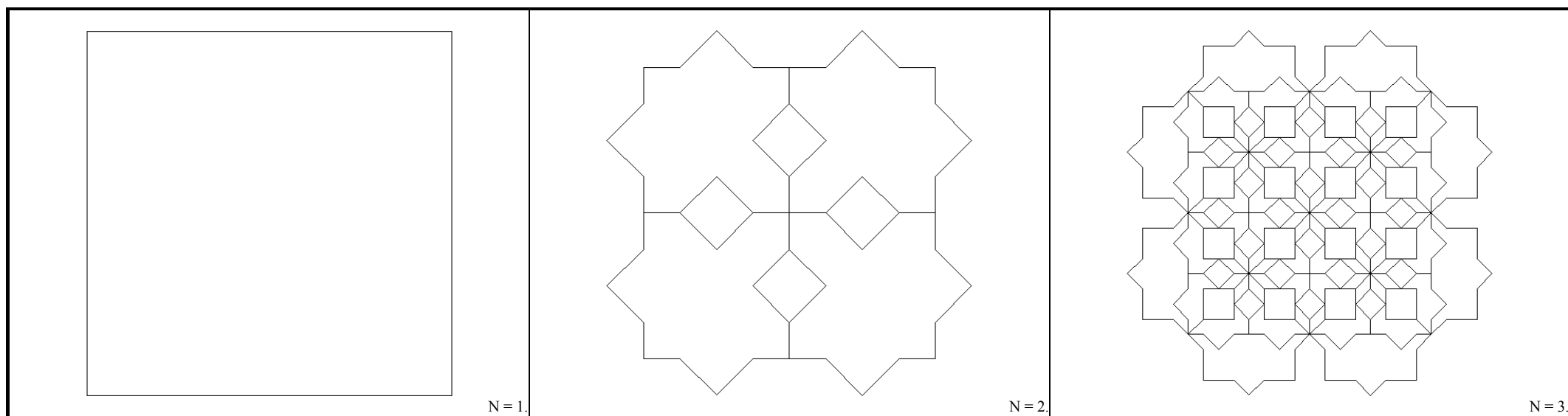
Angle 8

Axiom F -- F

F = F+ @Q2F -- F+ @iQ2F -- F+@Q2F -- F+ @iQ2F



N = 4.



N = 1.

N = 2.

N = 3.

Pythagoras -13

$\delta = 45^\circ$
 A = XXXX
 $F \rightarrow F + (\sqrt{2}F) - - (\sqrt{2}F) + F - - F + (\sqrt{2}F) - - (\sqrt{2}F) + F$
 X $\rightarrow F - - F$

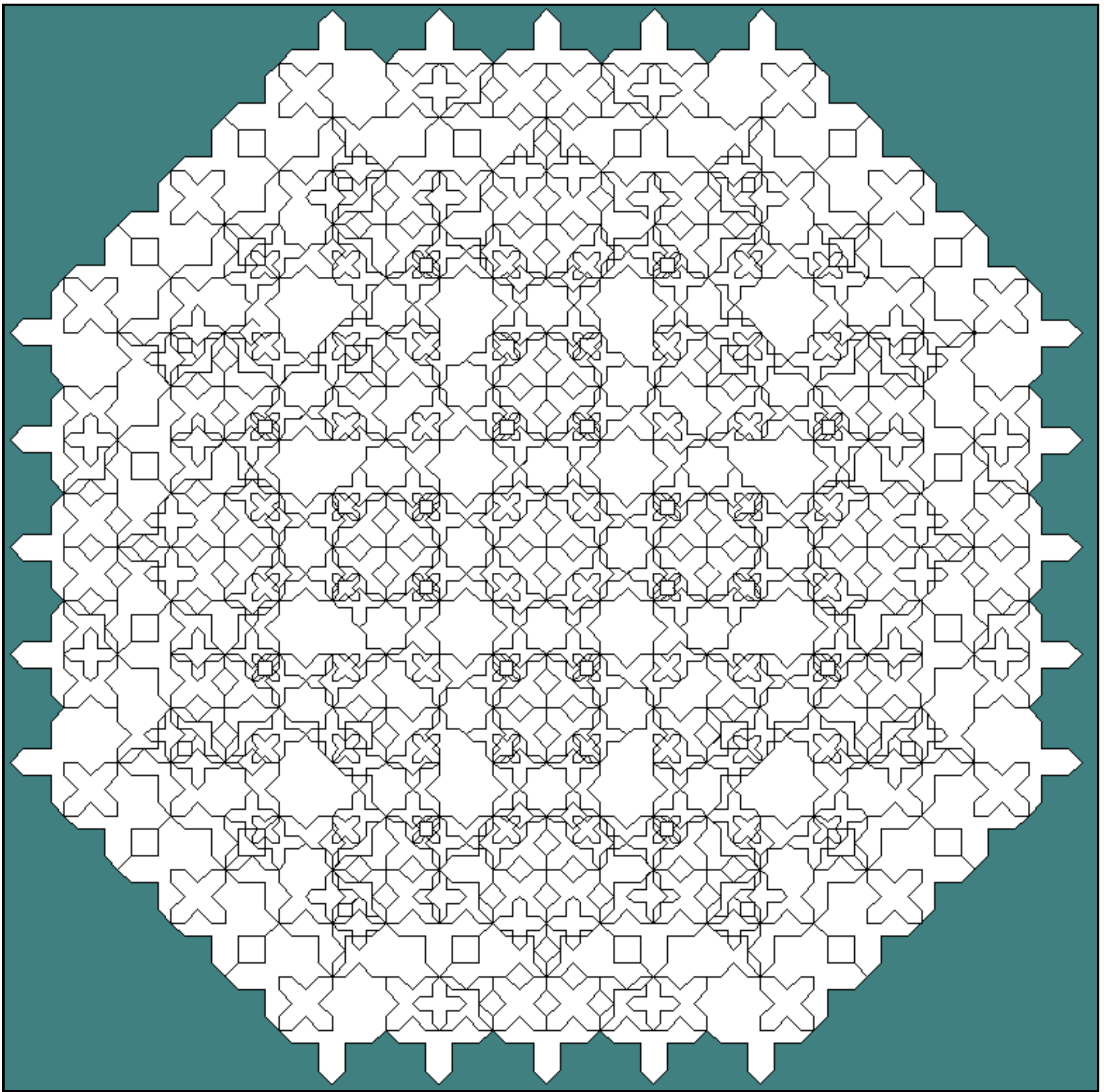
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(Fractint code:)

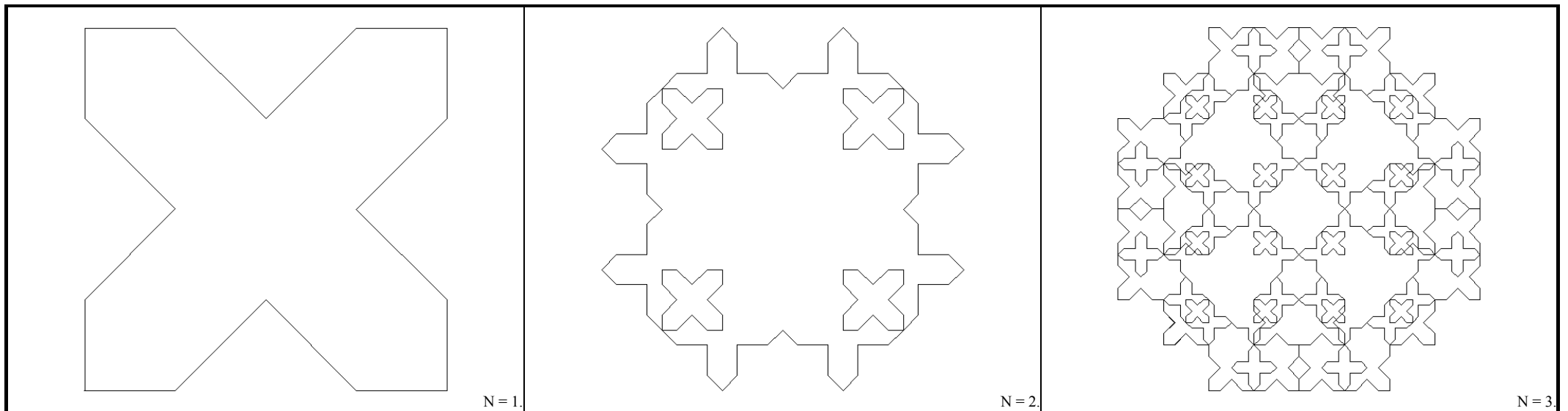
Angle 8

Axiom FFFF

$F = F + @ Q2F - - F + @ iQ2F - - F + @ Q2F - - F + @ iQ2F + F$



N=4.



N=1.

N=2.

N=3.

Pythagoras -14

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$\delta = 45^\circ$

A = F + + F

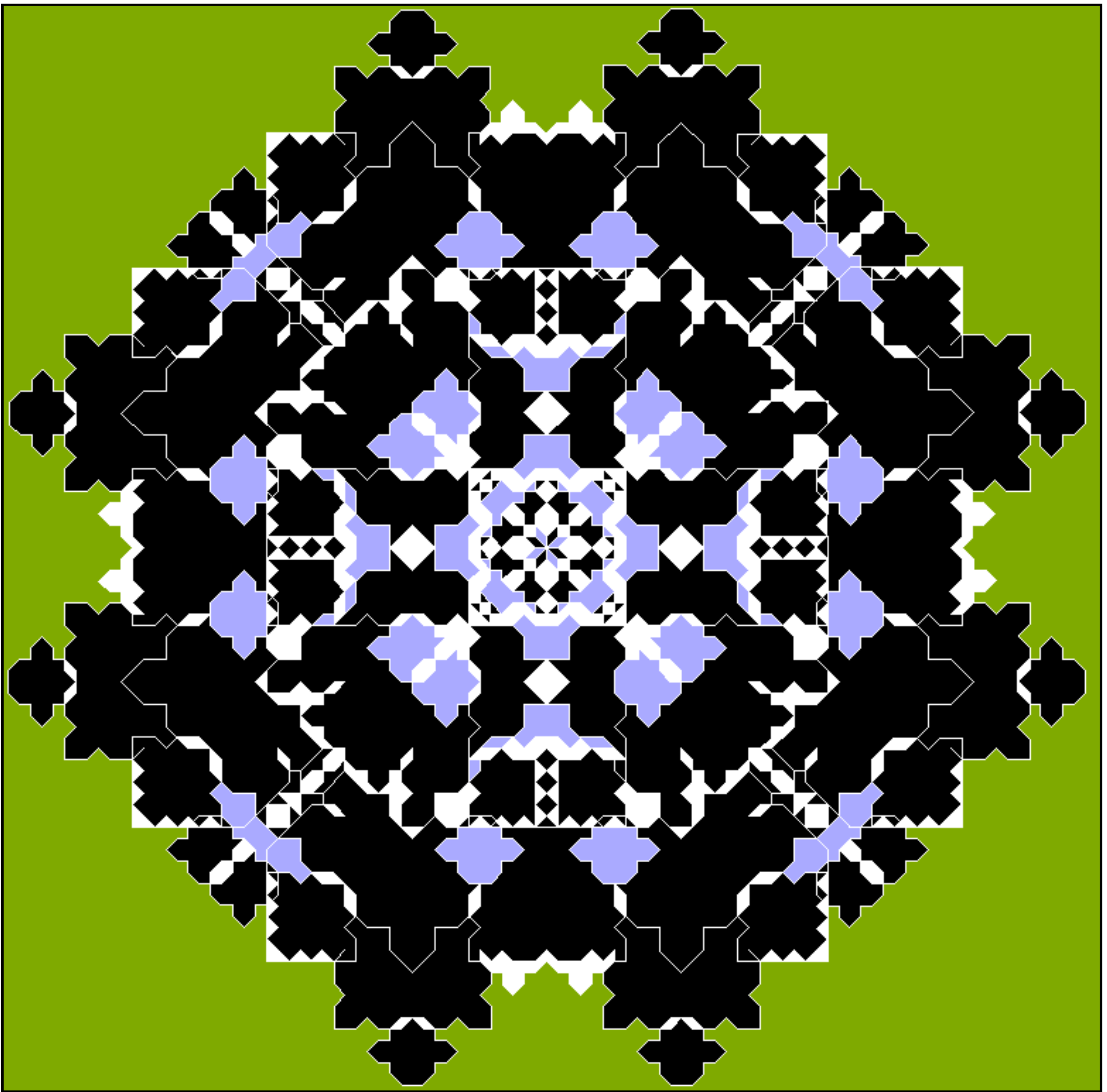
F → F + ($\sqrt{2}$ F) - - ($\sqrt{2}$ F) + F - - F + ($\sqrt{2}$ F) - - ($\sqrt{2}$ F) + F

(Fractint code:)

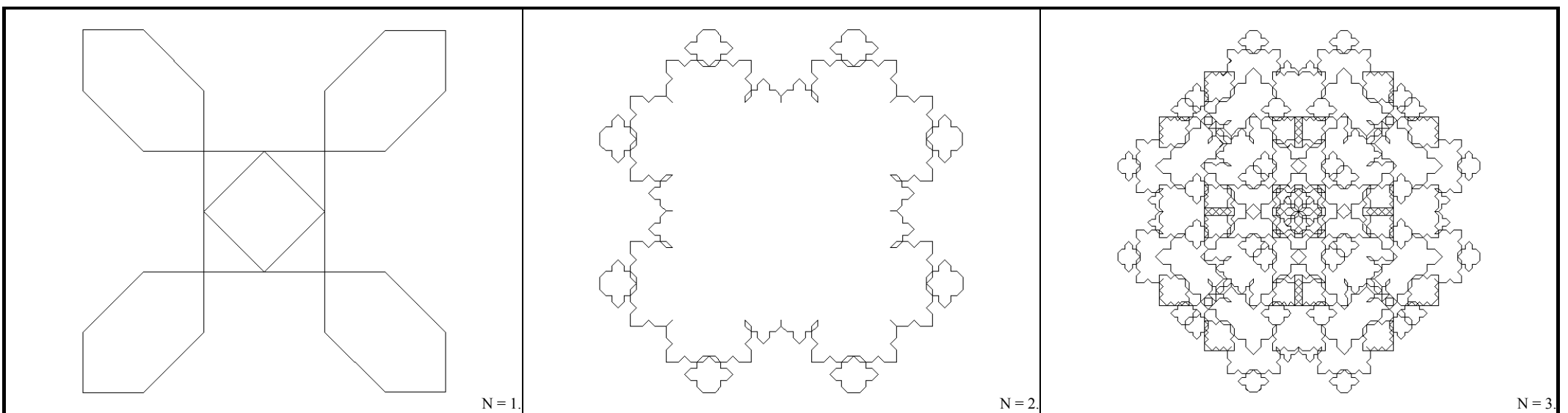
Angle 8

Axiom F + + F

F = F + @ Q2F - - F + @ iQ2F - - F + @ Q2F - - F + @ iQ2F + F



N = 3.



N = 1.

N = 2.

N = 3.

Pythagoras -16

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$\delta = 45^\circ$

A = FFFF

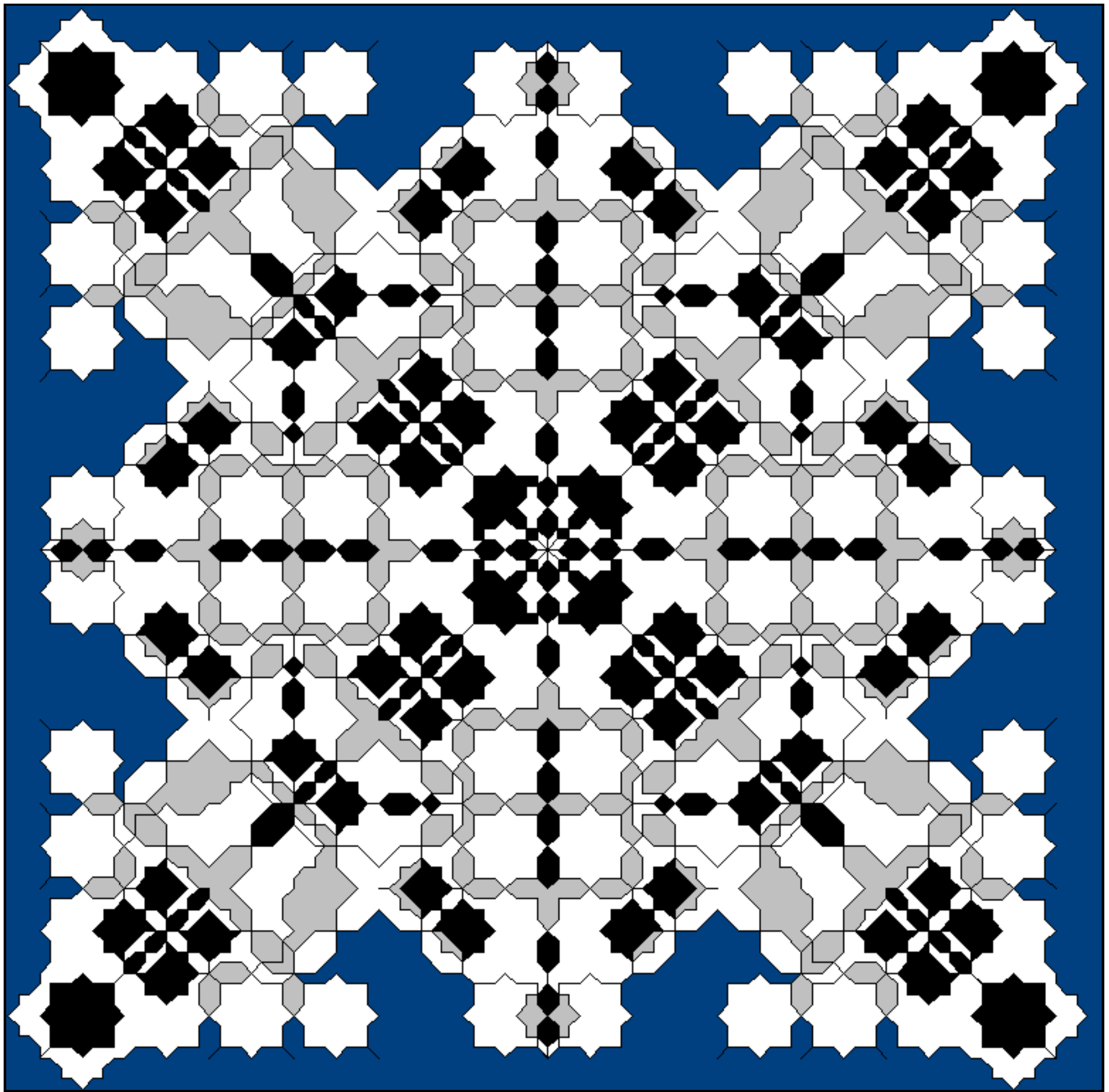
$F \rightarrow F - (\sqrt{2}F) - F ++ F - (\sqrt{2}F) -- (\sqrt{2}F) - F ++ F - (\sqrt{2}F) - F --$

(Fractint code:)

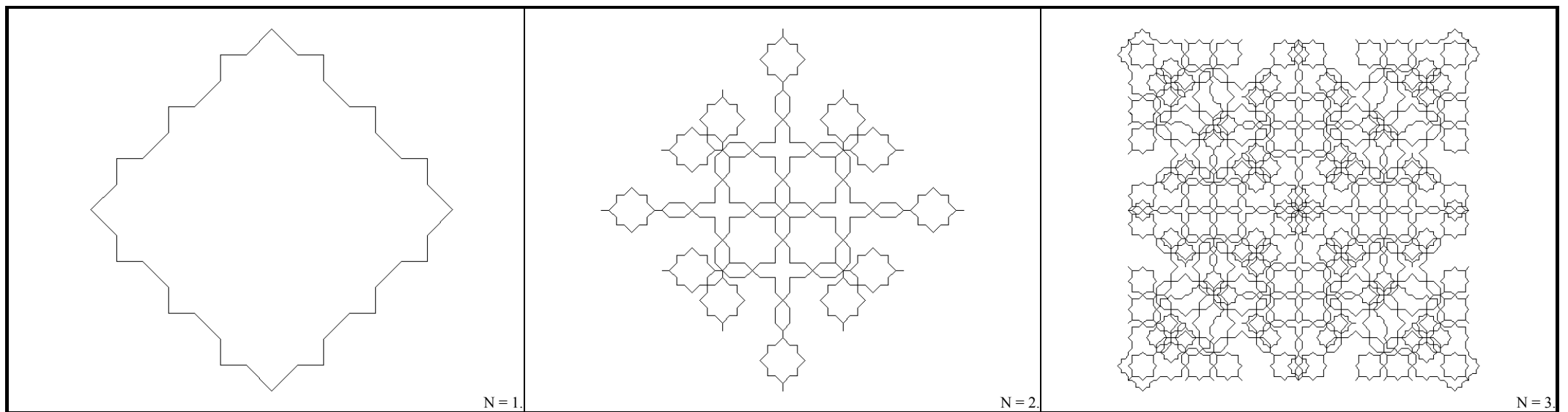
Angle 8

Axiom FFFF

$F=F- @Q2F-@iQ2F++F- @Q2F- -F-@iQ2F++F-@Q2F-@Qi2F- -$



N=3.



N=1.

N=2.

N=3.

Pythagoras -17

$\delta = 45^\circ$

A = FFFF

$F \rightarrow F - (\sqrt{2}F) - F ++ F - (\sqrt{2}F) ++ (\sqrt{2}F) - F ++ F - (\sqrt{2}F) - F ++$

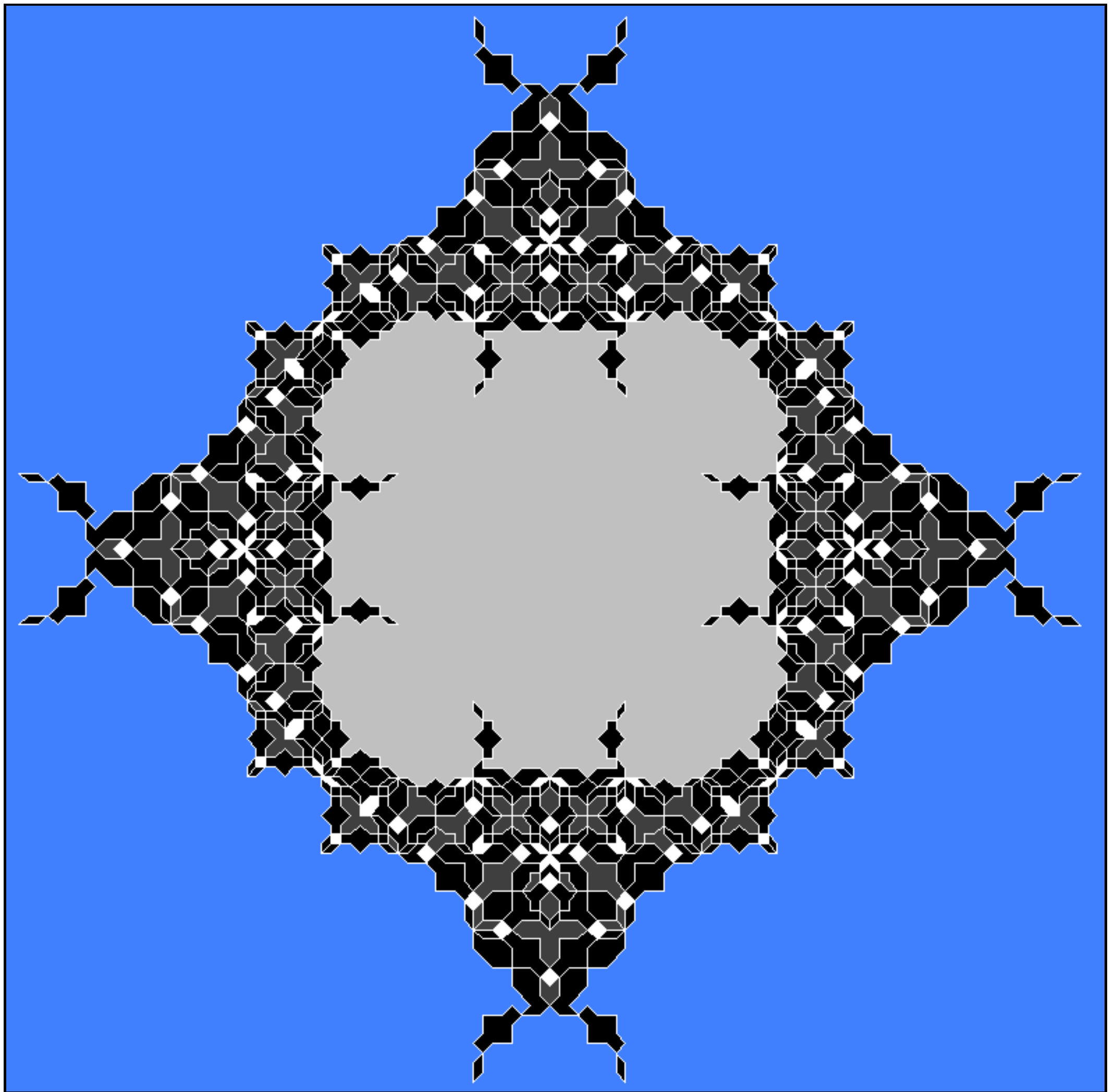
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(Fractint code:)

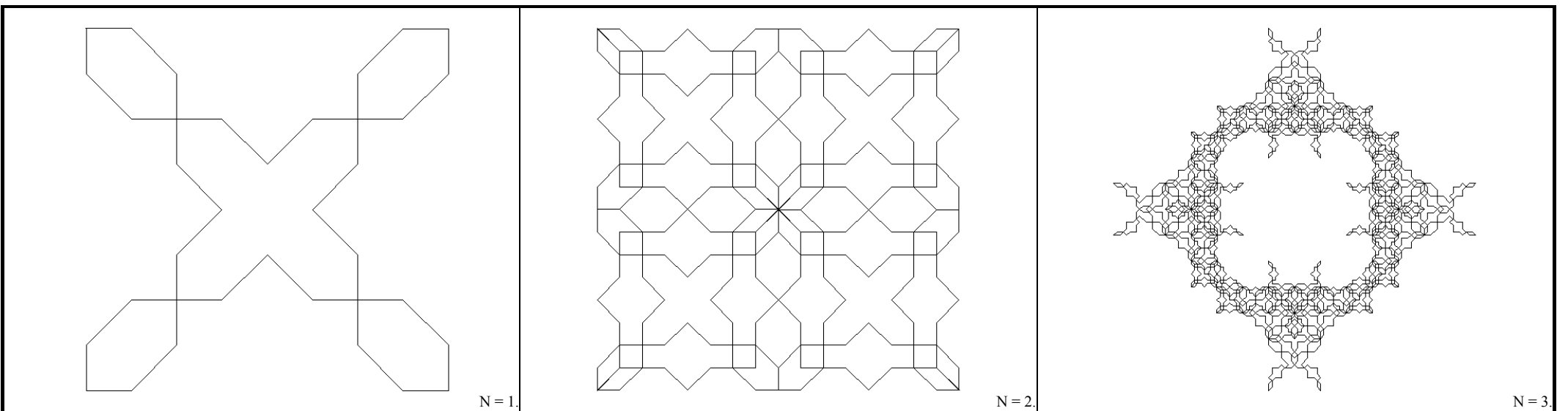
Angle 8

Axiom FFFF

$F=F-@Q2F- @iQ2F++F- @Q2F++F-@iQ2F++F-@Q2F-@qi2F++$



N=3.



N=1.

N=2.

N=3.

Pythagoras - 18

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$\delta = 45^\circ$

A = FFFF

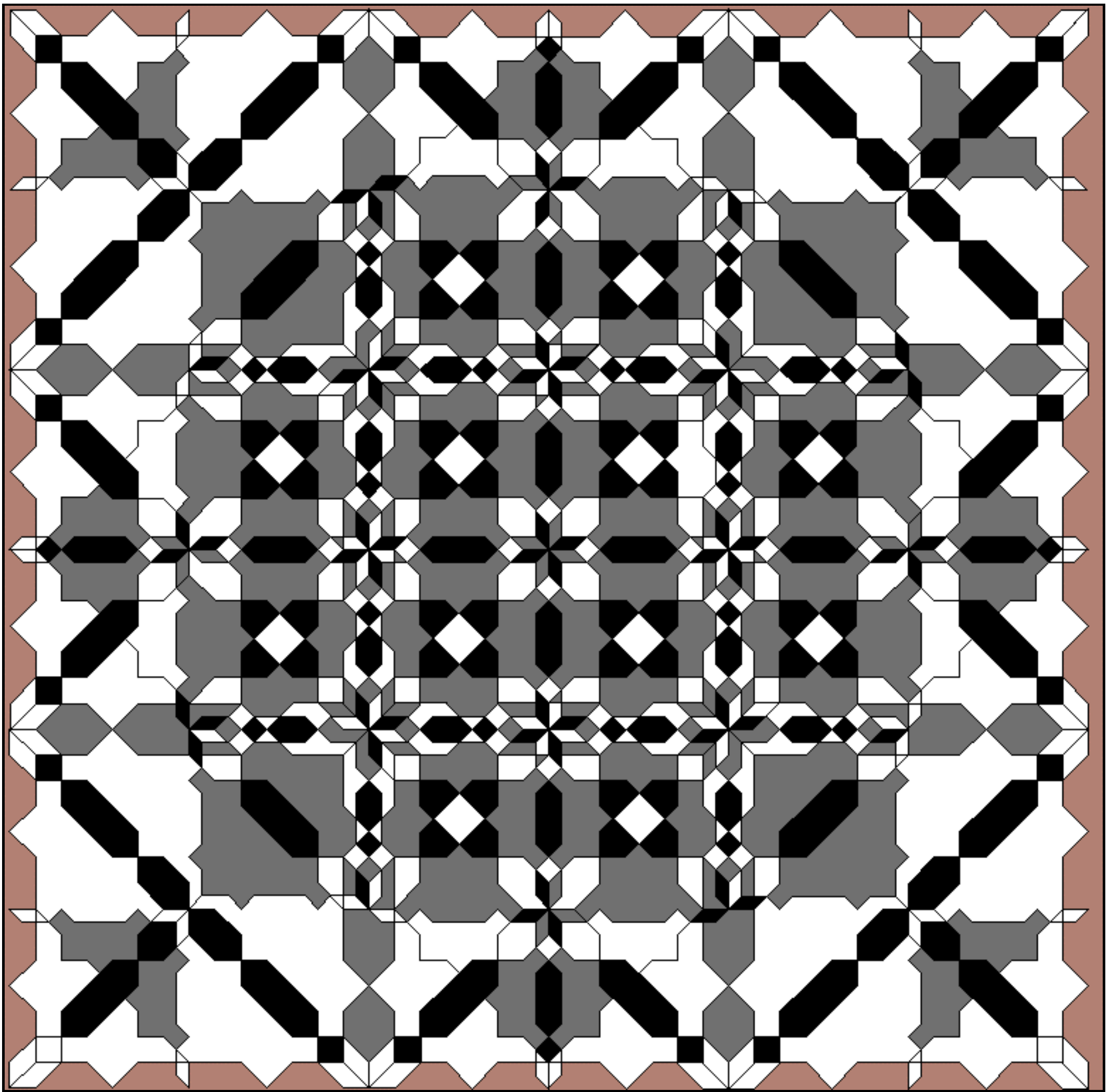
$F \rightarrow F - (\sqrt{2}F) - F++F - (\sqrt{2}F) ++ (\sqrt{2}F) - F++F - (\sqrt{2}F) - F--$

(Fractint code:)

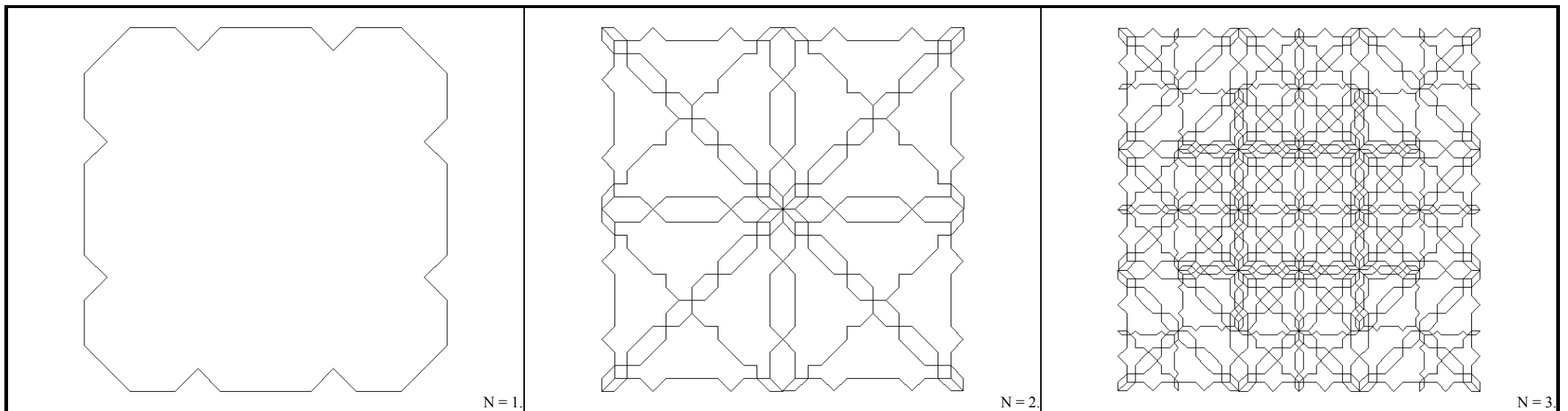
Angle 8

Axiom FFFF

$F=F- @Q2F-@iQ2F++F-@Q2F++F-@iQ2F++F-@Q2F-@qi2F--$



N = 3.



N = 1.

N = 2.

N = 3.

Pythagoras -19

$\delta = 45^\circ$

A = F ++F ++ F ++ F

F \rightarrow F $-(\sqrt{2}F)$ - F ++ F $-(\sqrt{2}F)$ - - | - $-(\sqrt{2}F)$ - F ++ F $-(\sqrt{2}F)$ - F -

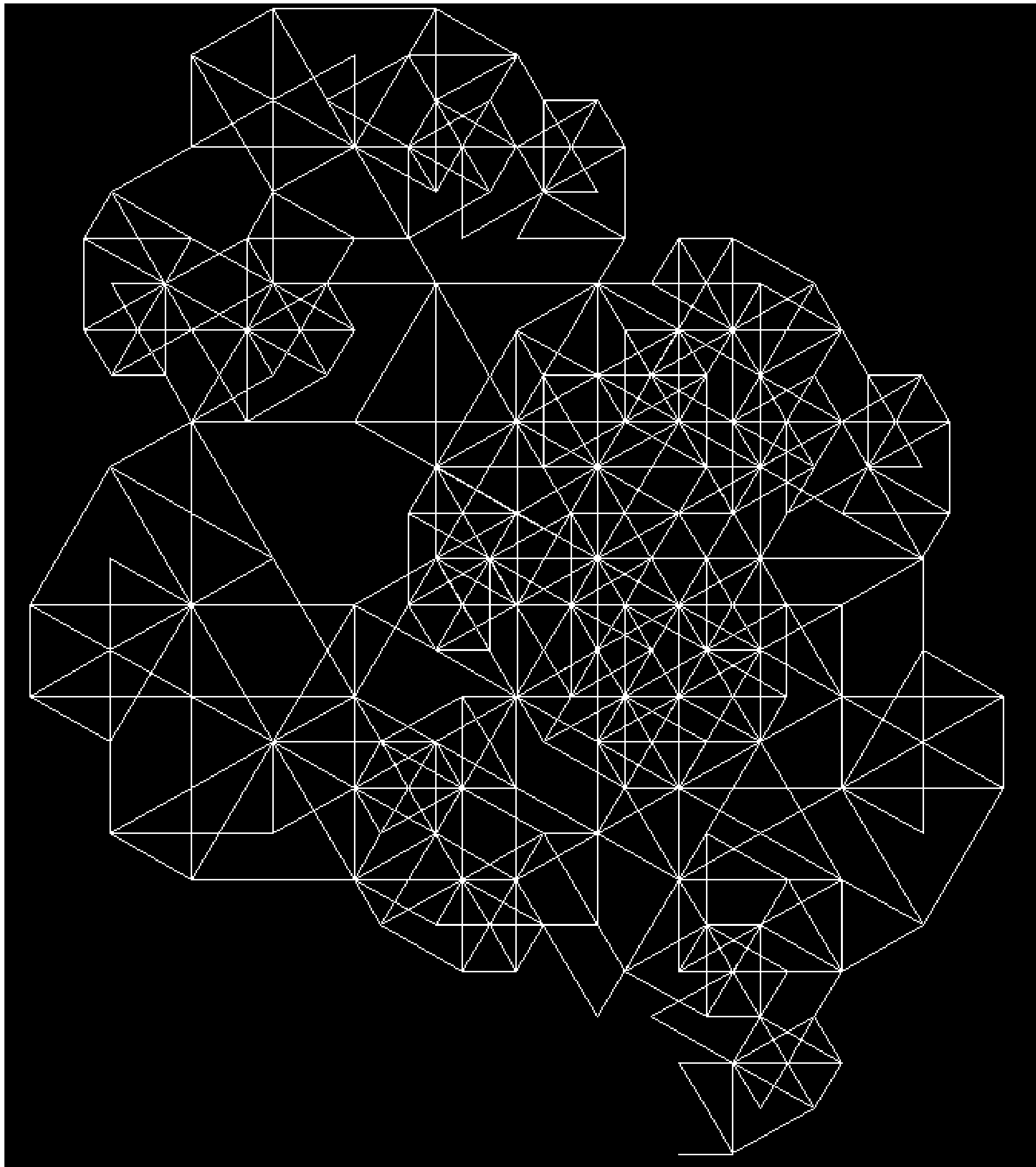
© G. Pernecky, 1995

(Fractint code:)

Axiom F++F++F++F

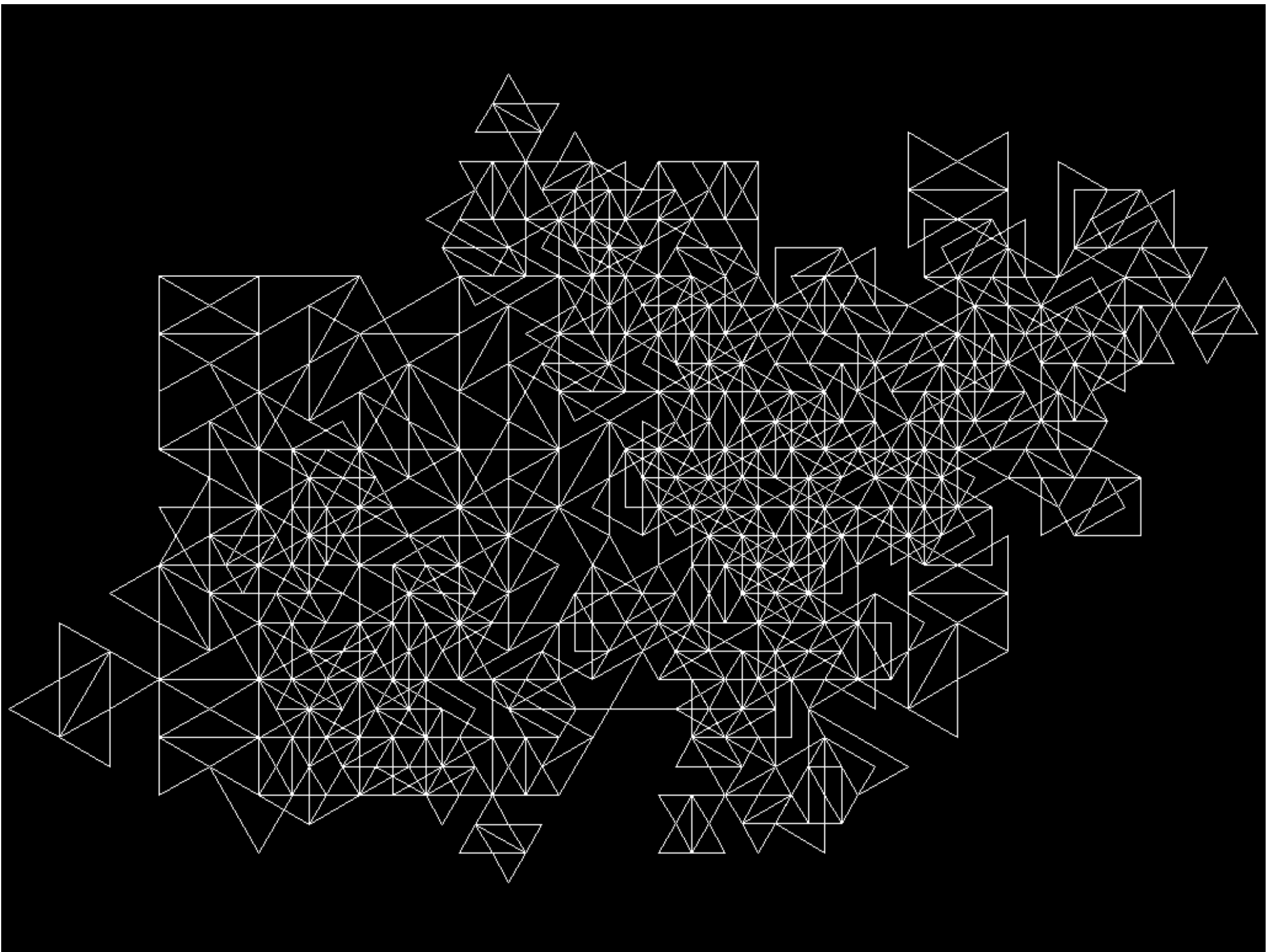
Angle 8

F=-F-@Q2F-@iQ2F++F-@Q2F--|--F-@iQ2F++F-@Q2F-@Qi2F-

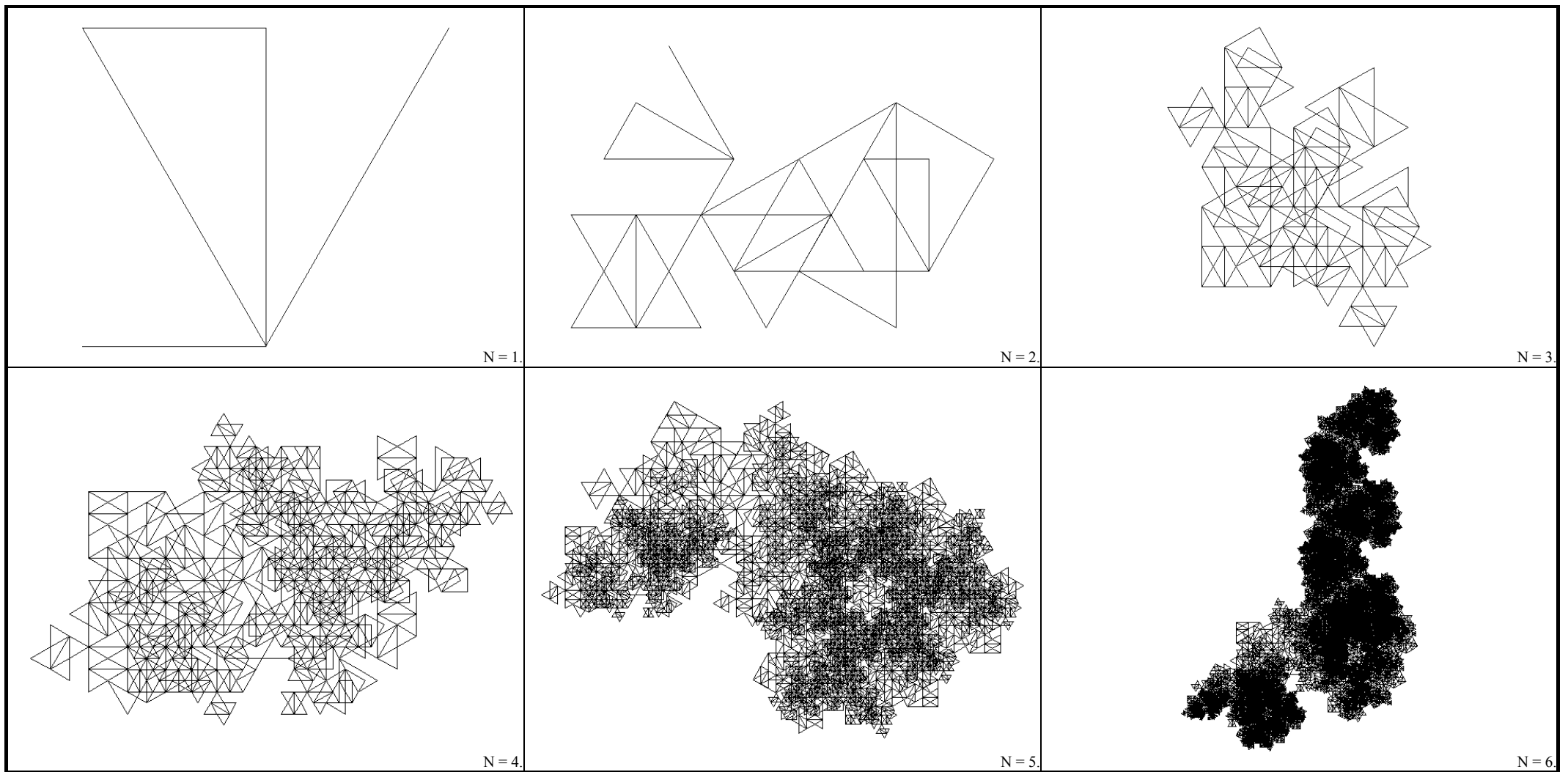


N=4.

<p style="text-align: right;">N=1.</p>	<p style="text-align: right;">N=2.</p>	<p style="text-align: right;">N=3.</p>
<p>Pythagoras - 32 © G. Pernecky, 1995</p>	<p>$\delta = 30^\circ$ $A = F$ $F \rightarrow F+++ (\sqrt{3}F)+++ F++++ FF$</p>	<p>(Fractint code:) Angle 12 Axiom F $F = F+++ @ Q3F+++ @ iQ3F++++ FF$</p>



N = 4.



Pythagoras - 33

$\delta = 30^\circ$

A = F

F \rightarrow F + + + ($\sqrt{3}$ F) + + + F + + + + FF + + + + FF

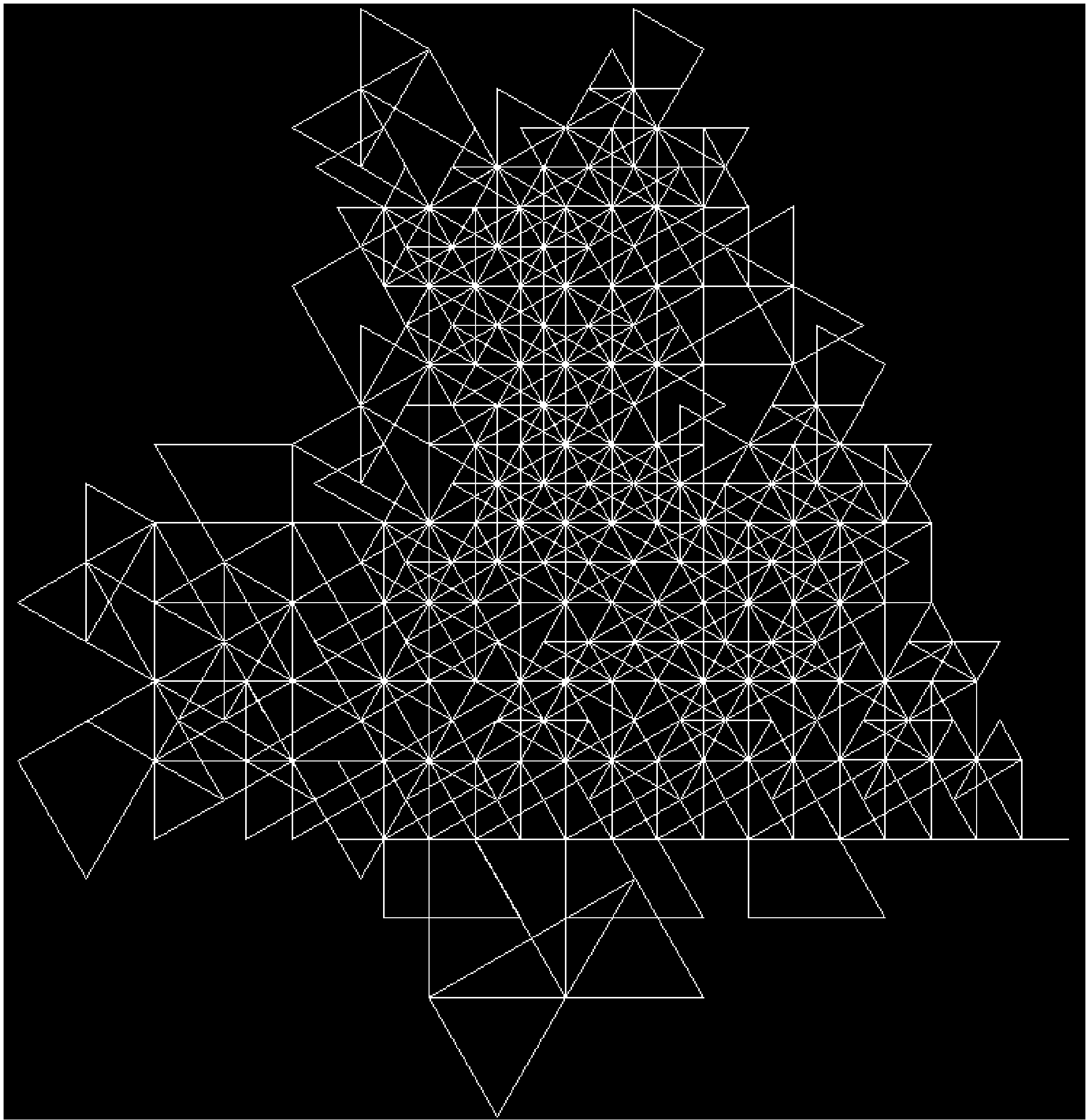
© G. Pernecky, 1995

(Fractint code:)

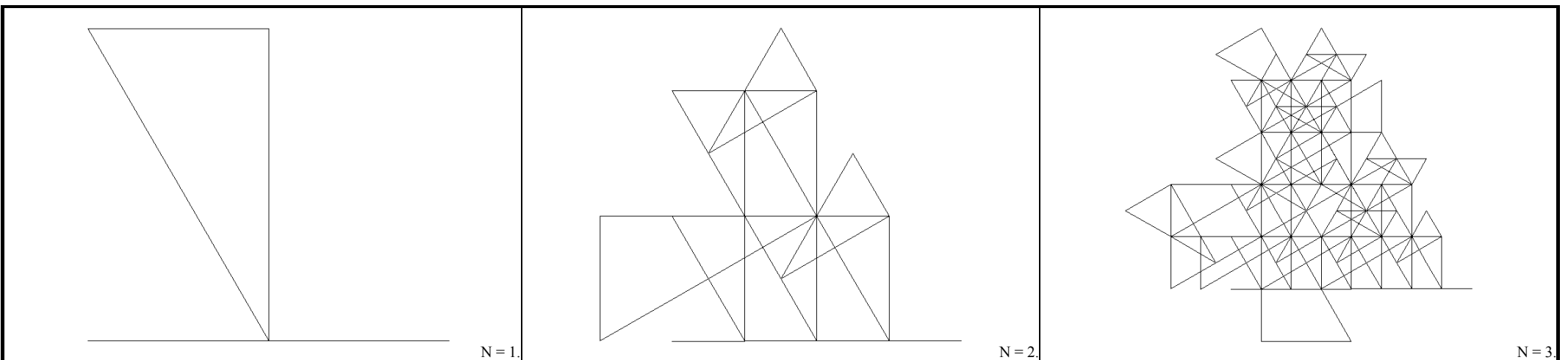
Angle 12

Axiom F

F = F + + + @ Q3F + + + @ iQ3F + + + + FF + + + + FF



N = 4.



N = 1.

N = 2.

N = 3.

Pythagoras - 34

$\delta = 30^\circ$
A = F

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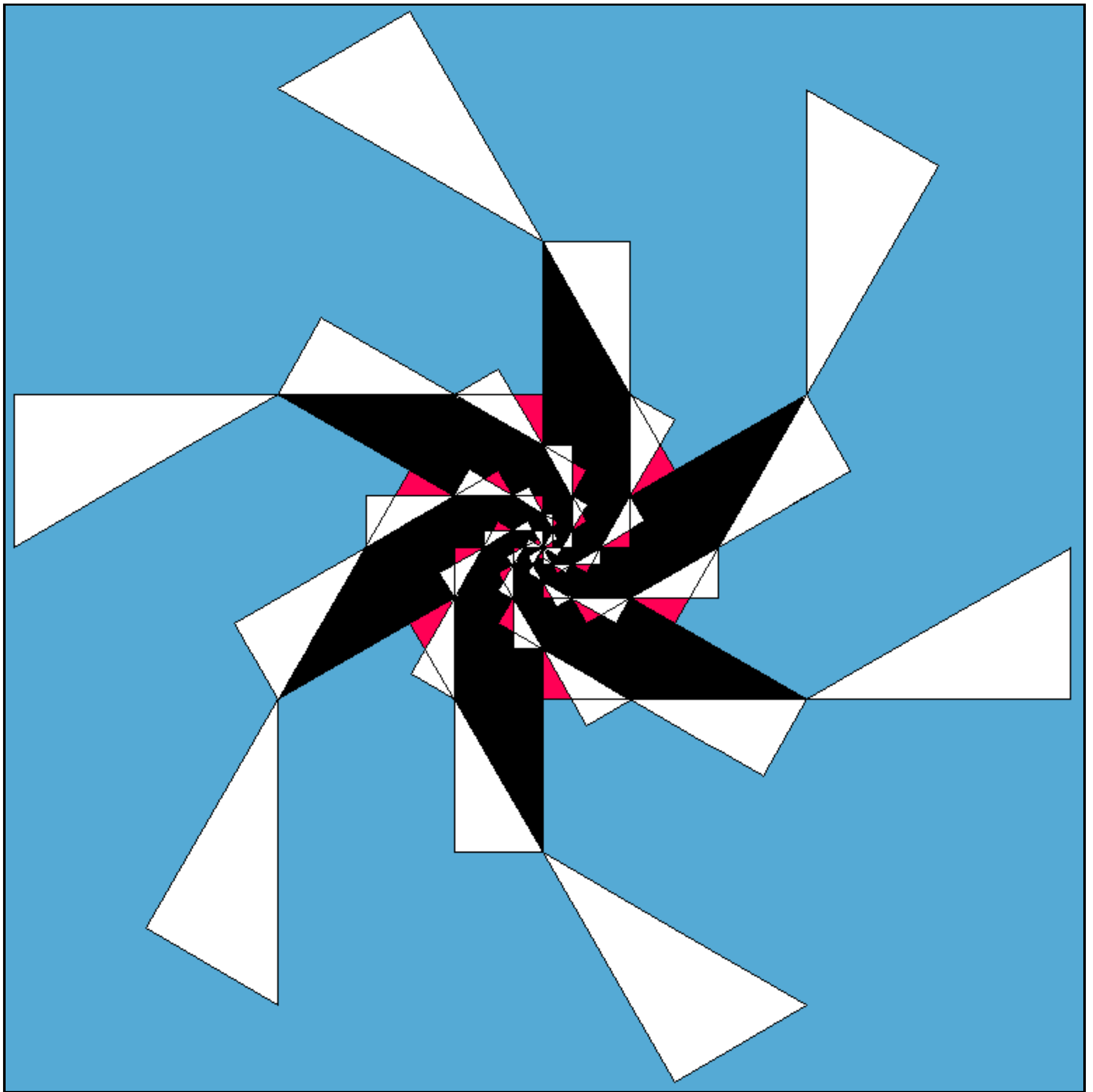
$F \rightarrow F+++ (\sqrt{3}F)+++ F++++ FF++$

(Fractint code:)

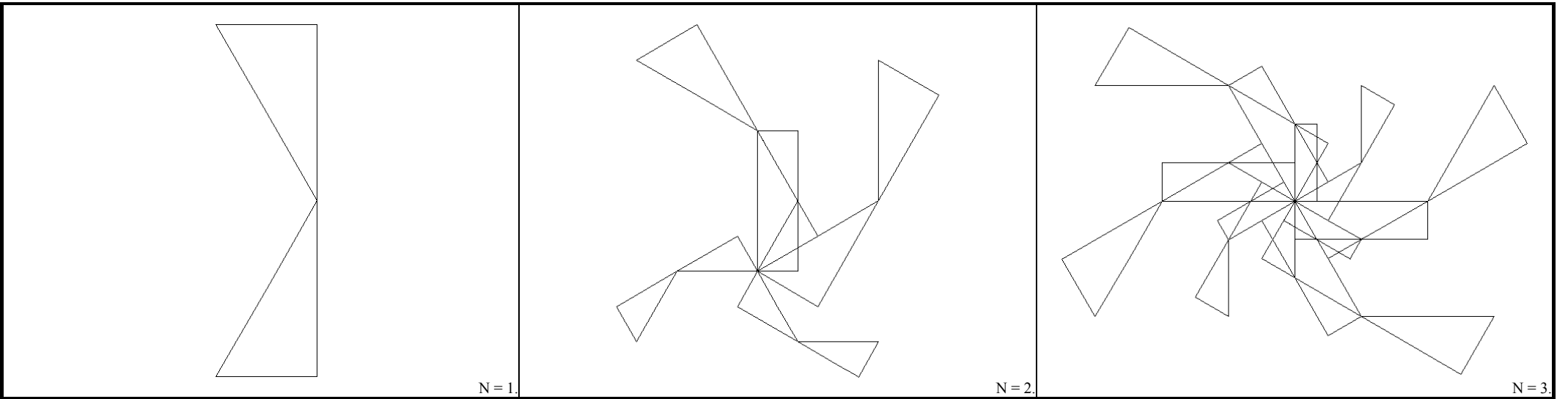
Angle 12

Axiom F

$F = F+++ @ Q3F+++ @ iQ3F++++ FF++ F$



N=6.



N=1.

N=2.

N=3.

Pythagoras - 39

$\delta = 30^\circ$

A = F

$F \rightarrow F+++ (\sqrt{3}F) + FF-----F----(\sqrt{3}F) - FF$

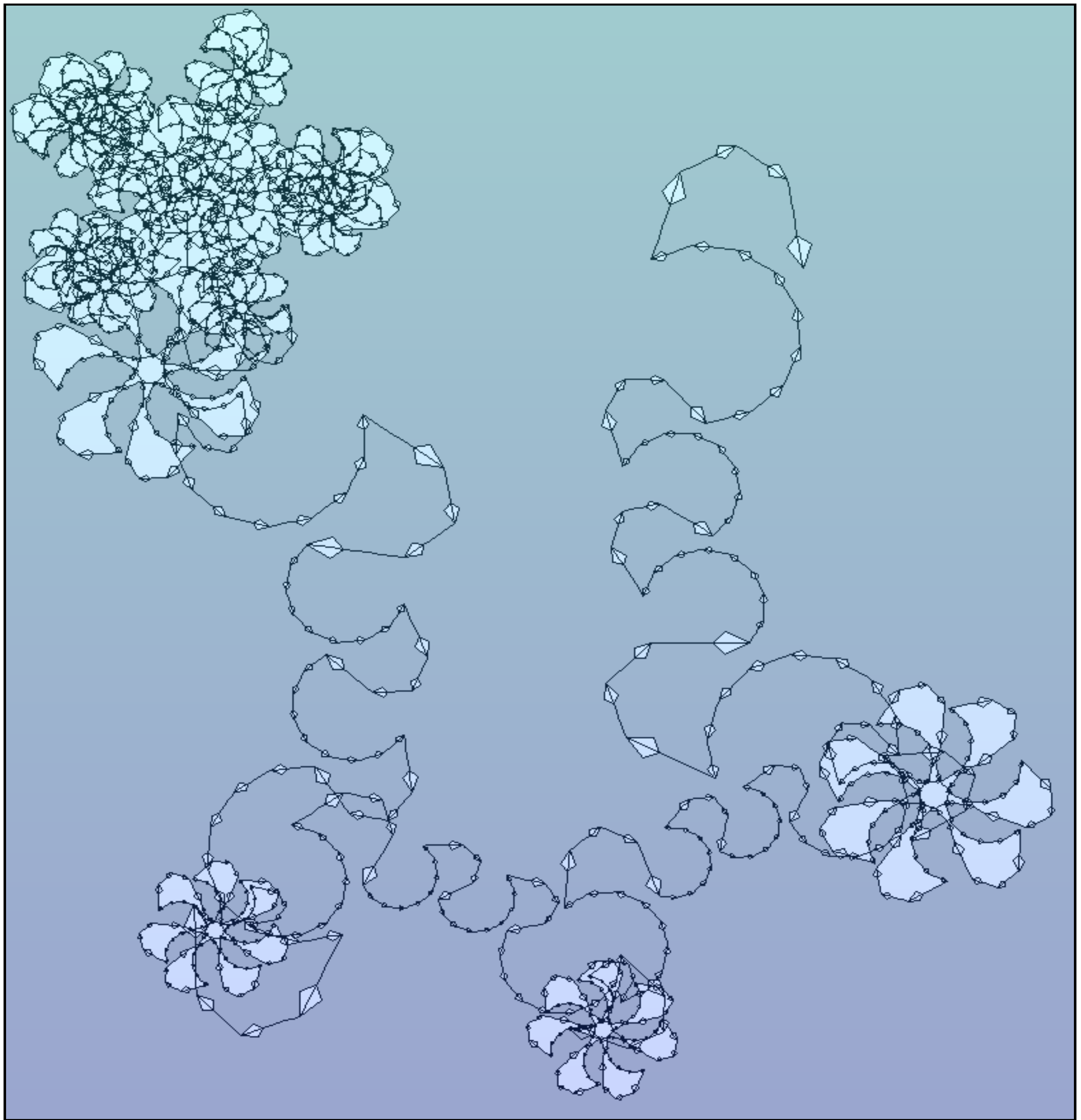
© G. Pernecky, 1995

(Fractint code:)

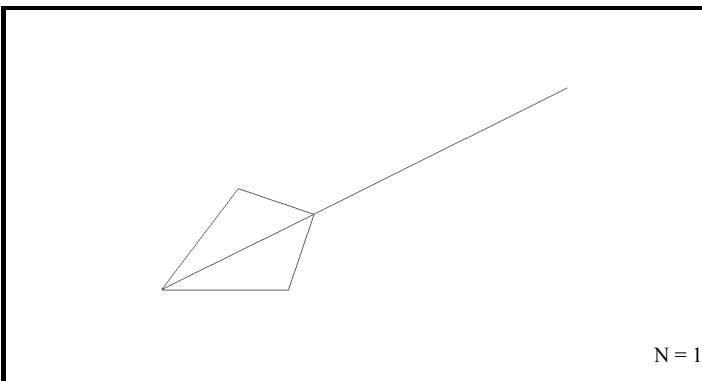
Angle 12

Axiom F

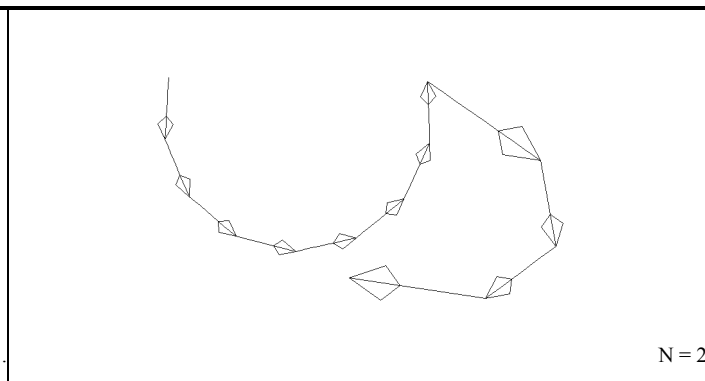
$F = F+++ @ Q3F + @ iQ3FF-----F--- @ Q3F - @ iQ3FF$



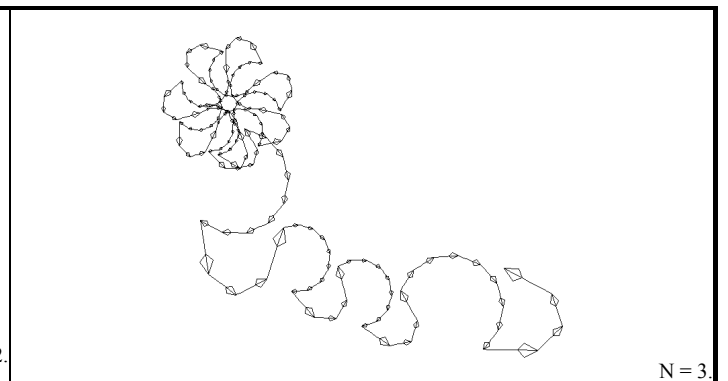
N=4.



N=1.



N=2.



N=3.

Pythagoras - 53

$\delta = 90^\circ$

A = F

F \rightarrow X ! ($\sqrt{5}$ F) (-71.5°) ($\sqrt{2}$ F) - ($\sqrt{2}$ F) (-71.5°) ($\sqrt{5}$ F) (-153.5°) FFFFFFFF ! X

X \rightarrow (+18°) Y

Y \rightarrow (-54°) X

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(! = reverse directions: +, -, /, \)

Angle 4

Axiom D

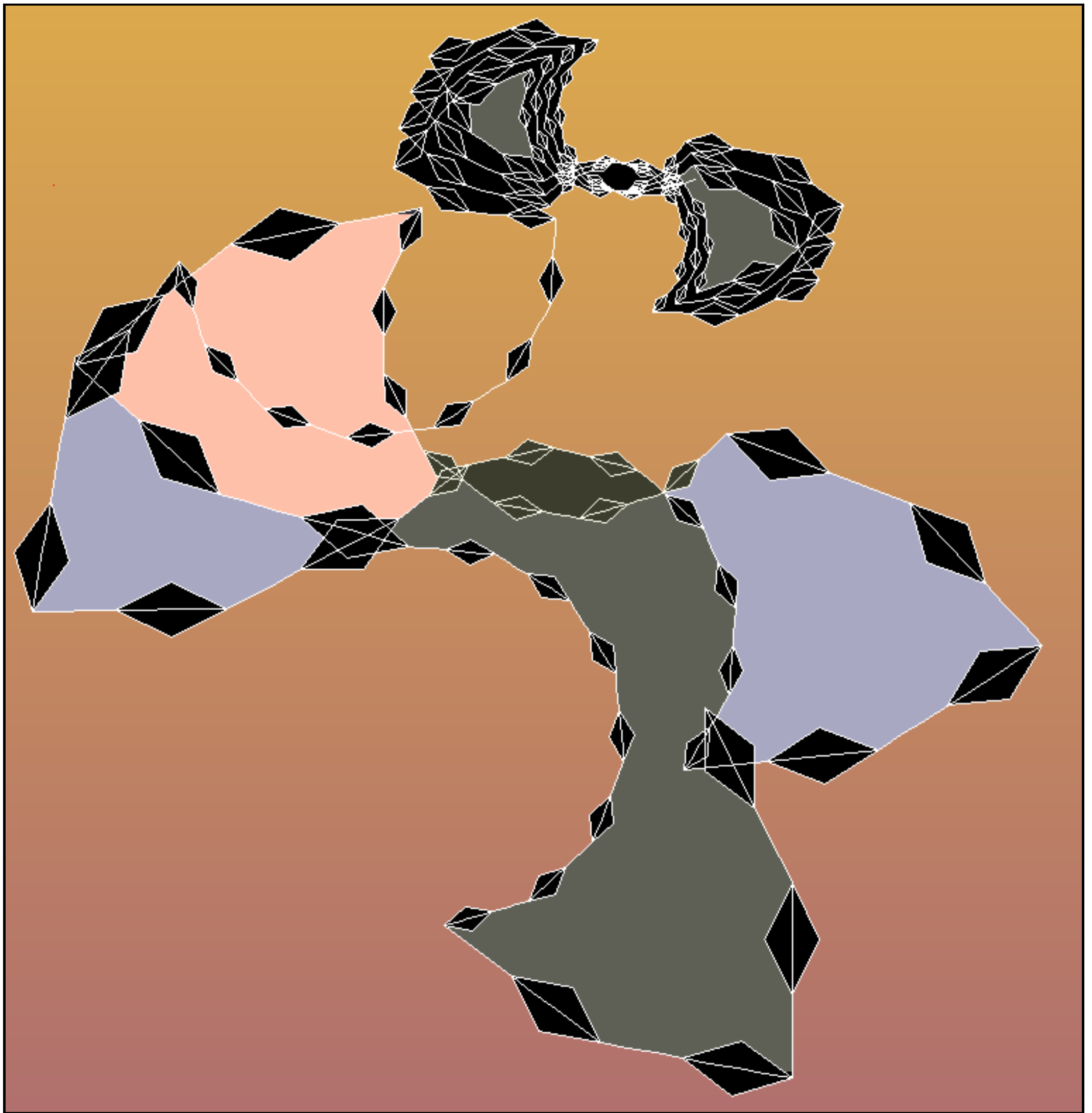
D = ! @Q5D@iQ5/71.5@Q2D/90D@iQ2/71.5

@Q5D@iQ5<5/153.5DDDDDDDD ! X

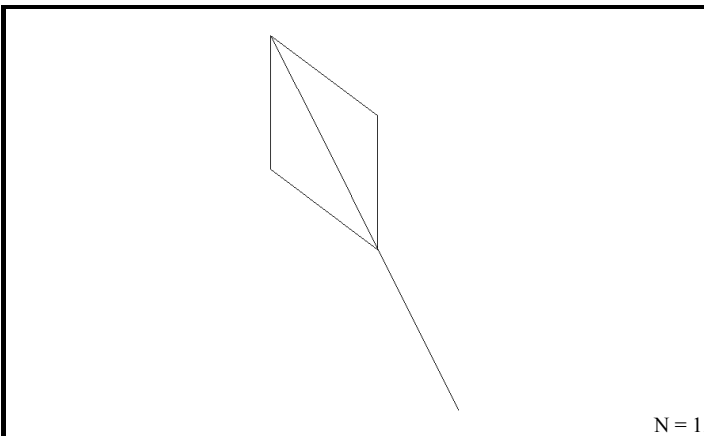
X = \18Y

Y = /54X

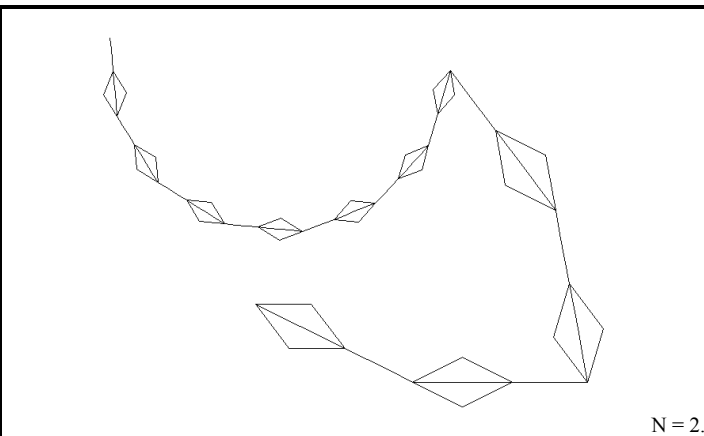
(Fractint code)



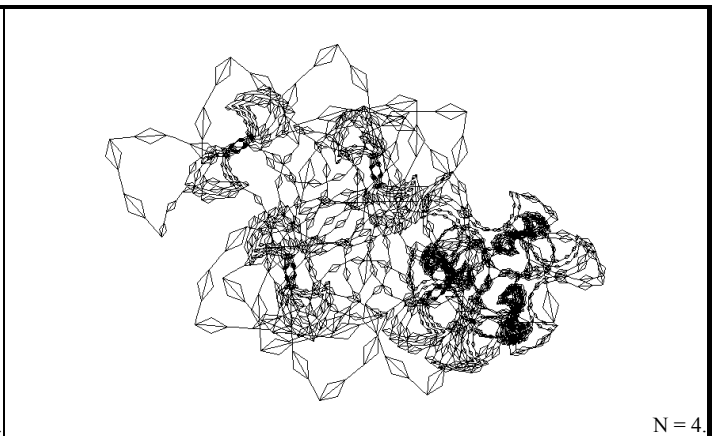
N=3.



N=1.



N=2.



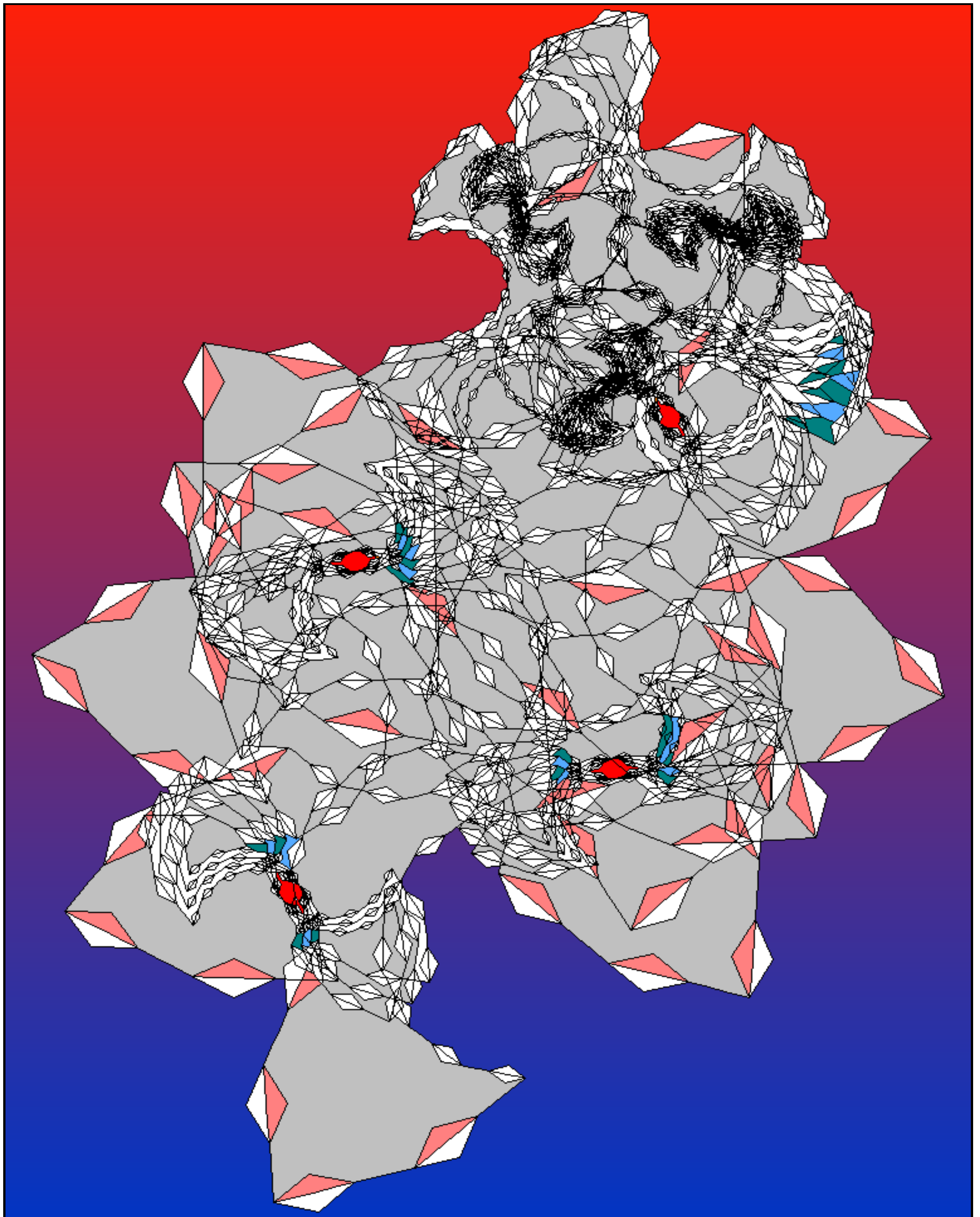
N=4.

Pythagoras - 54

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$\delta = 90^\circ$
 $A = -F$
 $F \rightarrow X! (\sqrt{5}F) (-53^\circ) (\sqrt{5}F) (-127^\circ) Y (\sqrt{5}F) - (153.5^\circ F) WFWFWFWFWFW !$
 $X \rightarrow +$ $Z \rightarrow (+127^\circ)$
 $Y \rightarrow Z$ $W \rightarrow Y$
 (! = reverse directions: +, -, /, \)

Axiom /90D
 Angle 4
 $D = X!@Q5D/53D/127YD/53D@iQ$
 $5/153.5DWDWDWDWDWDWDW!$
 $X = \backslash 90$ $Z = \backslash 127$
 $Y = Z$ $W = Y$ (Fractint code)



N=4.

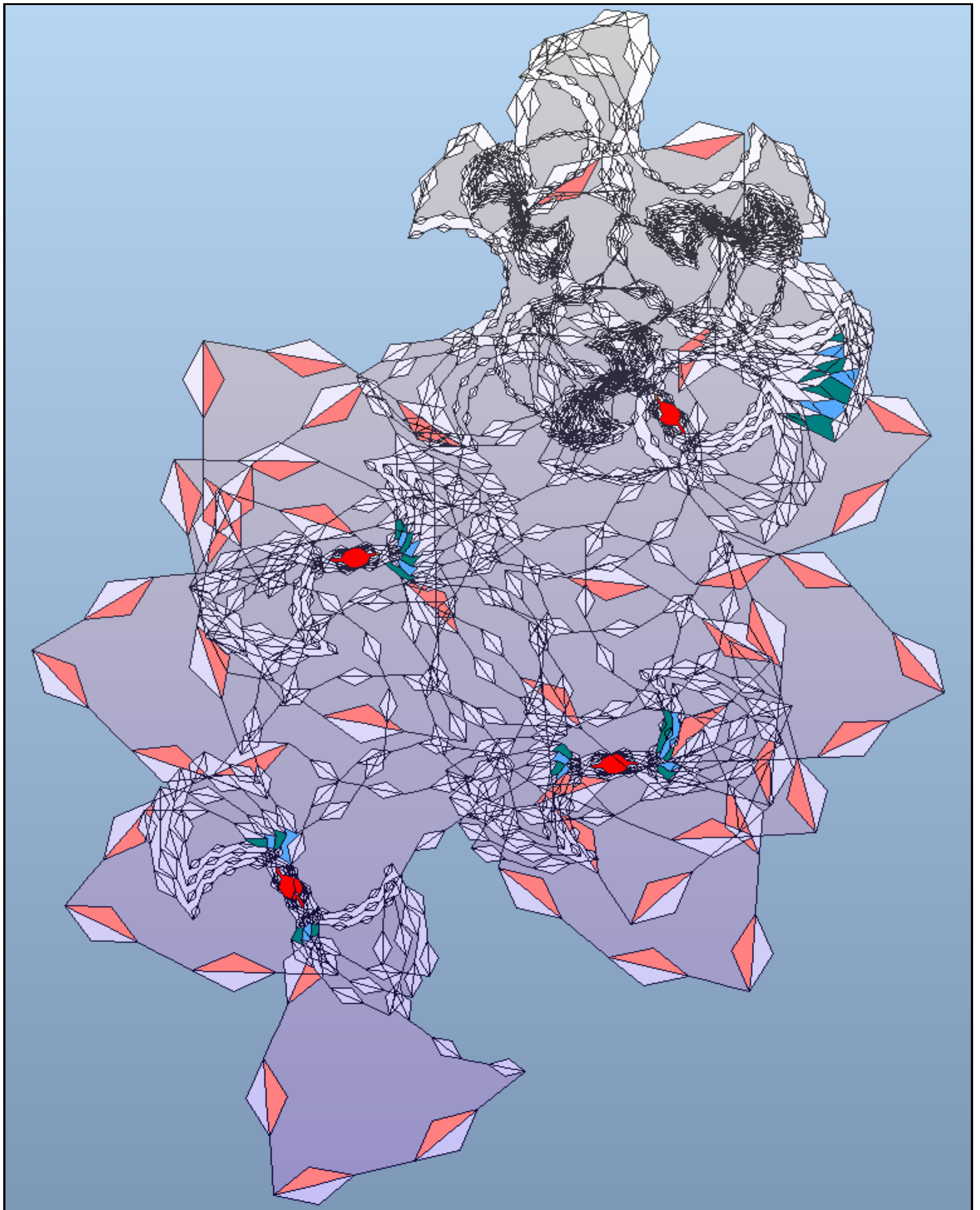
Pythagoras - 54

$\delta = 90^\circ$
 $A = -F$
 $F \rightarrow X \! (\sqrt{5}F) (-53^\circ) (\sqrt{5}F) (-127^\circ) Y (\sqrt{5}F) - (153.5^\circ F) WFWFWFWFWFW !$
 $X \rightarrow + \qquad Z \rightarrow (+127^\circ)$
 $Y \rightarrow Z \qquad W \rightarrow Y$

(! = reverse directions: +, -, /, \)

Axiom /90D
 Angle 4
 $D = X \! @Q5D/53D/127YD/53D@iQ$
 $5/153.5DWDWDWDWDWDWDW!$
 $X = \backslash 90 \qquad Z = \backslash 127$
 $Y = Z \qquad W = Y$ (Fractint code)

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N=4.

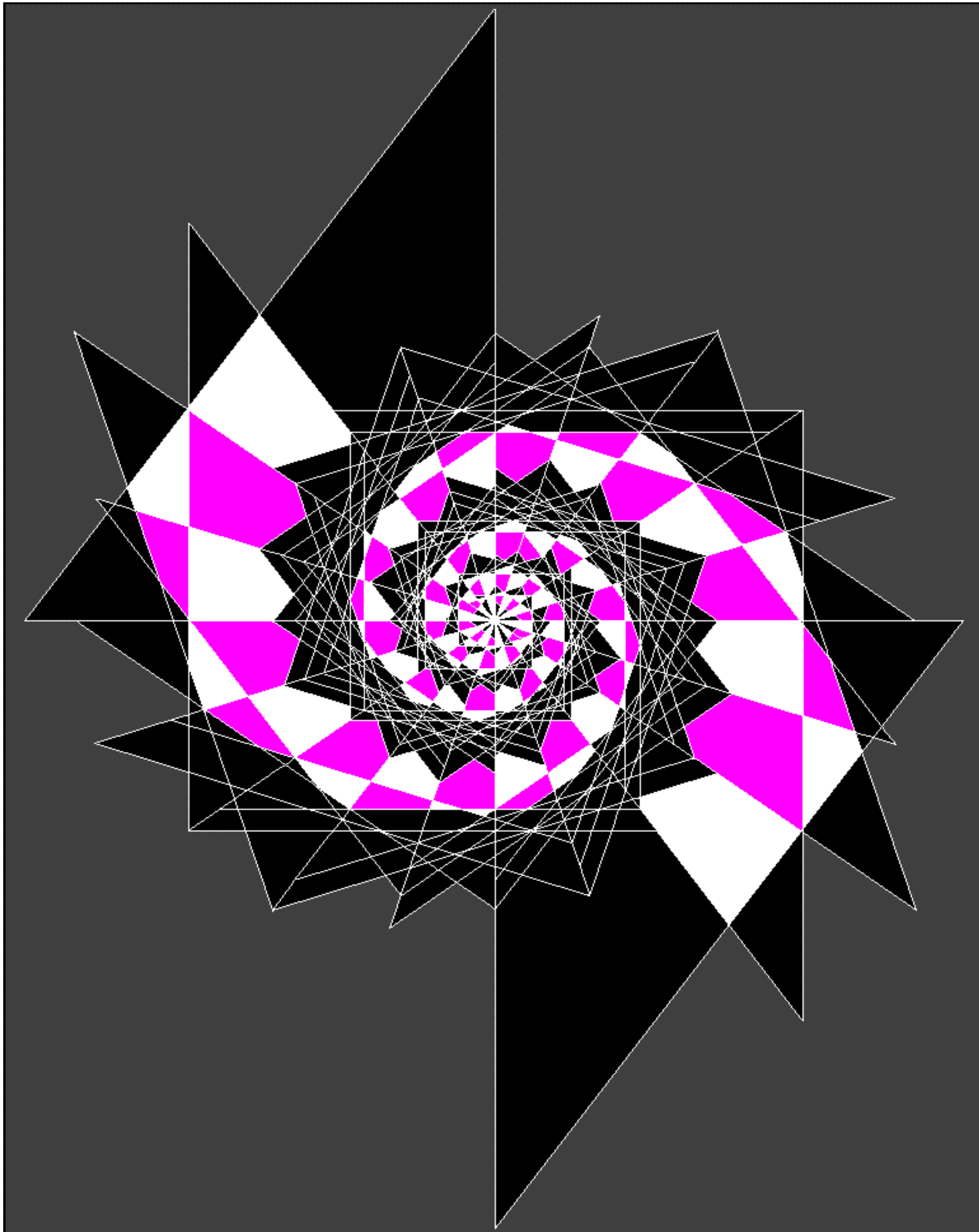
Pythagoras - 54

$\delta = 90^\circ$
 $A = -F$
 $F \rightarrow X! (\sqrt{5}F) (-53^\circ) (\sqrt{5}F) (-127^\circ) Y (\sqrt{5}F) - (153.5^\circ F) WFWFWFWFWFW!$
 $X \rightarrow +$ $Z \rightarrow (+127^\circ)$
 $Y \rightarrow Z$ $W \rightarrow Y$

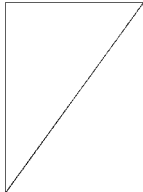
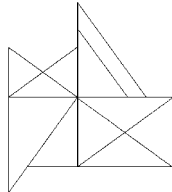
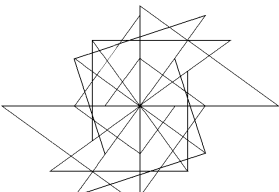
(! = reverse directions: +, -, /, \)

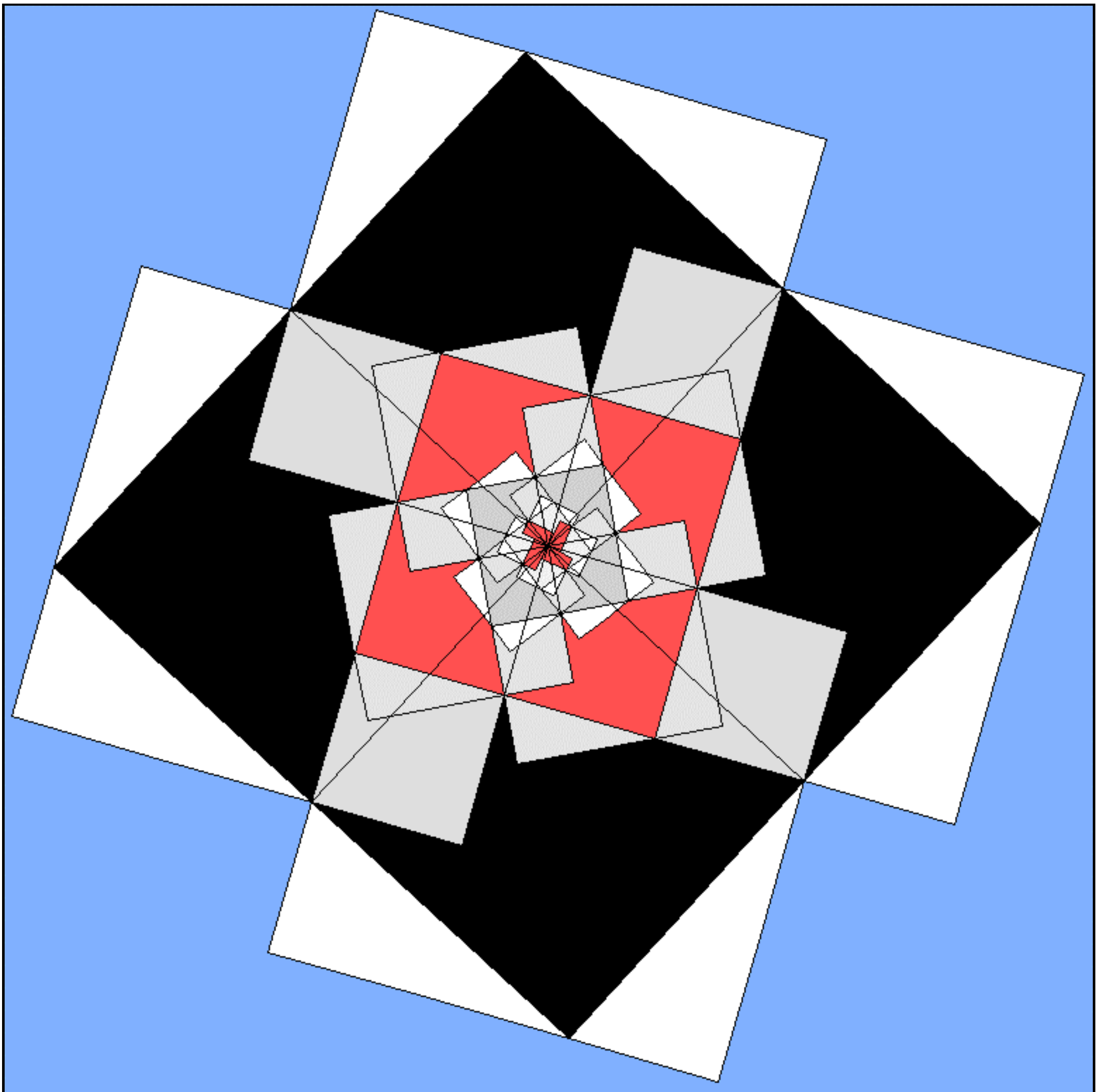
Axiom /90D
 Angle 4
 $D = X!@Q5D/53D/127YD/53D@iQ$
 $5/153.5DWDWDWDWDWDWDW!$
 $X = \backslash 90$ $Z = \backslash 127$
 $Y = Z$ $W = Y$ (Fractint code)

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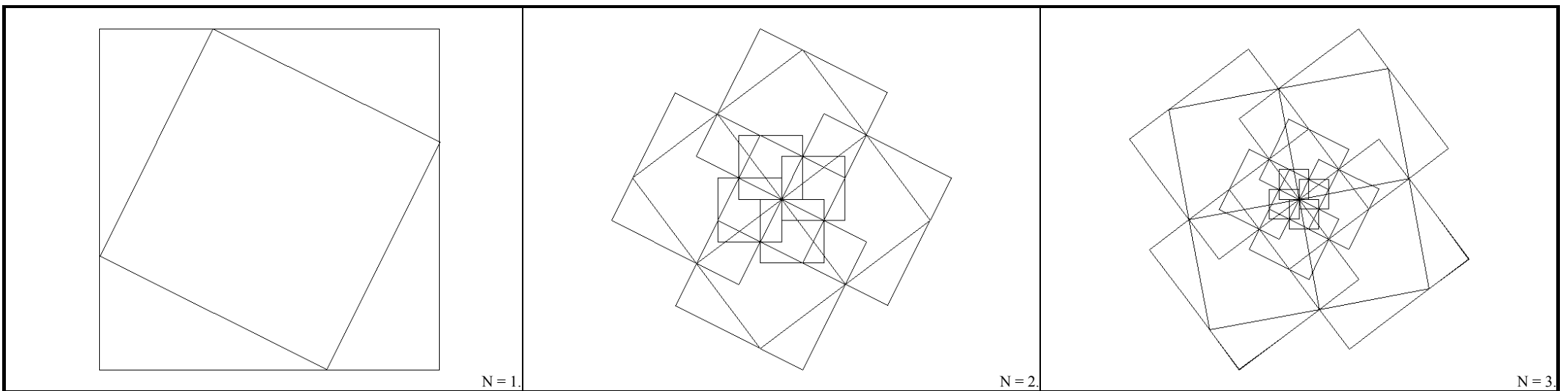


N=7.

<p>Pythagoras -56</p> <p>© G. Pernecky, 1995</p>	<p>$\delta = 72^\circ$ $A = F (-90^\circ) F$ $F \rightarrow ! F (+126^\circ) (1.7F) ++ (1.3747727 F) !$</p>	 <p>N=1.</p>	 <p>N=2.</p>	 <p>N=3.</p>
--	--	---	---	---



N=5.



N=1.

N=2.

N=3.

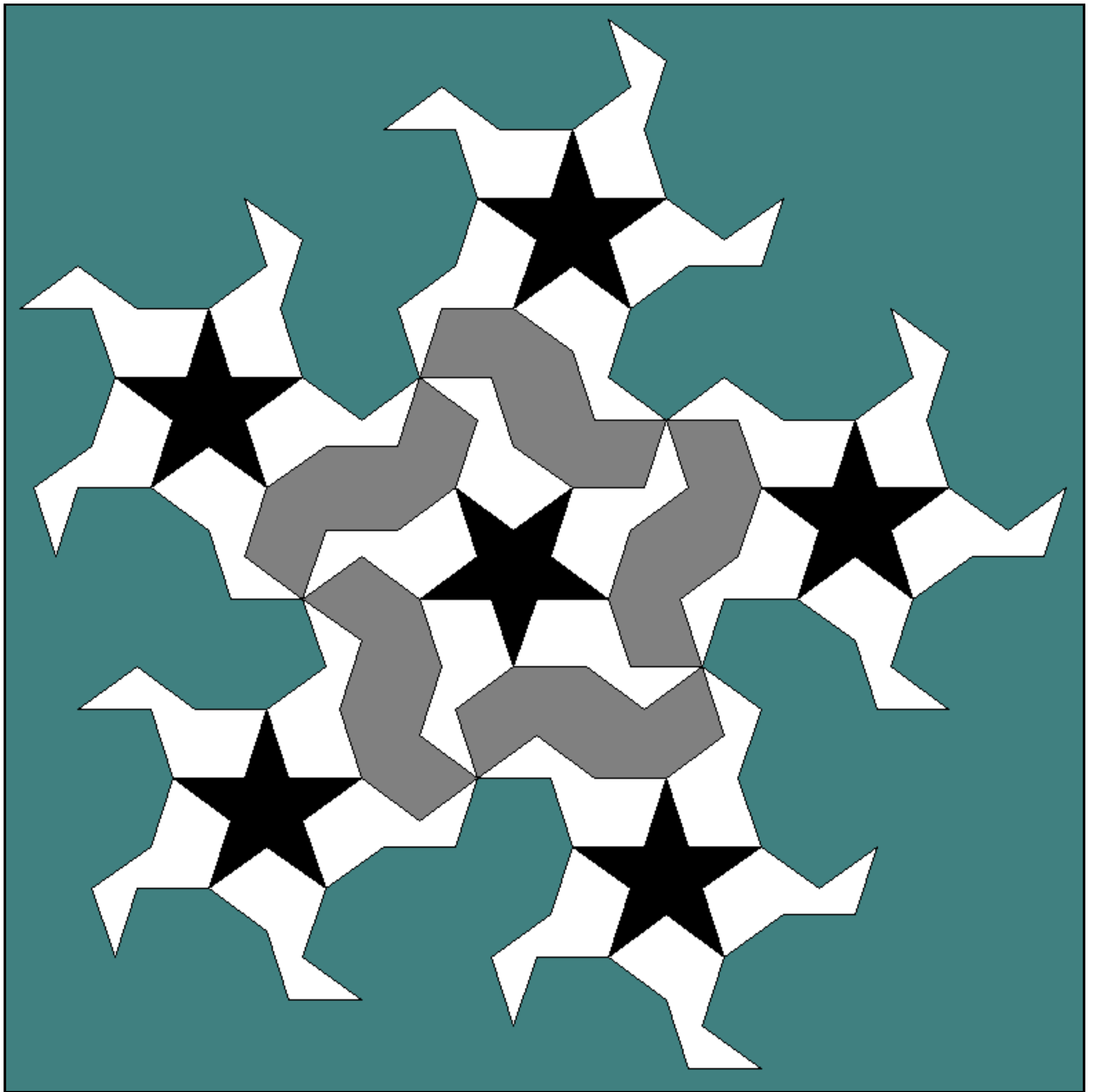
Pythagoras - 59

$\delta = 90^\circ$
 $A = F$
 $F \rightarrow [(-26.5^\circ)(\sqrt{5}F) - (\sqrt{5}F) - (\sqrt{5}F) - (\sqrt{5}F)]$
 $F \rightarrow FF - FFF - FFF - FFF - F$

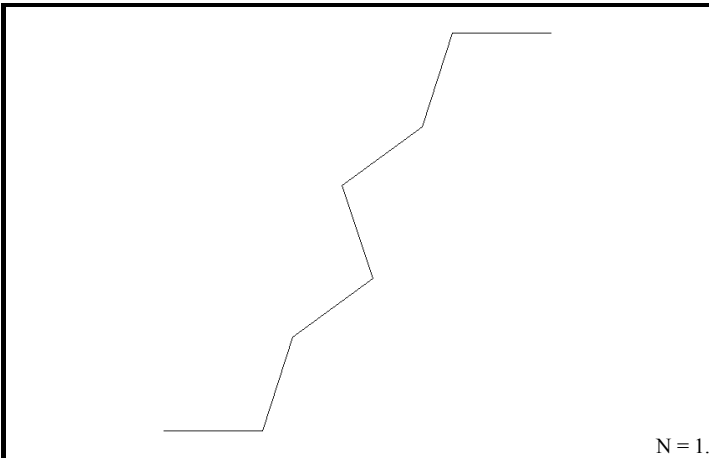
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(Fractint code:)

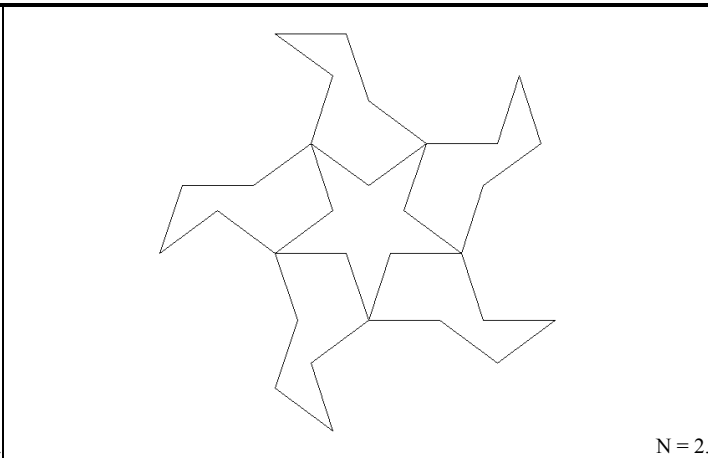
Angle 4
 Axiom D
 $D = [/26.5 @ Q5D /90 D /90 D /90 D @ iQ5]$
 $D = DD /90 DDD /90 DDD /90 DDD /90 D$



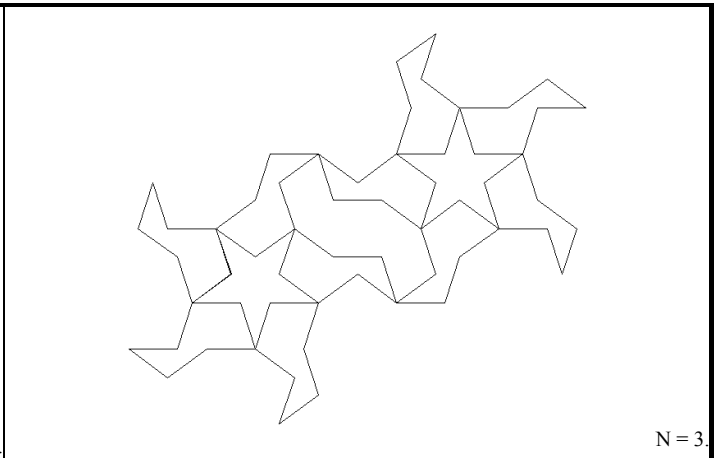
N=4



N=1.



N=2.



N=3.

Double 10 - 1

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(! = reverse directions: +, -)

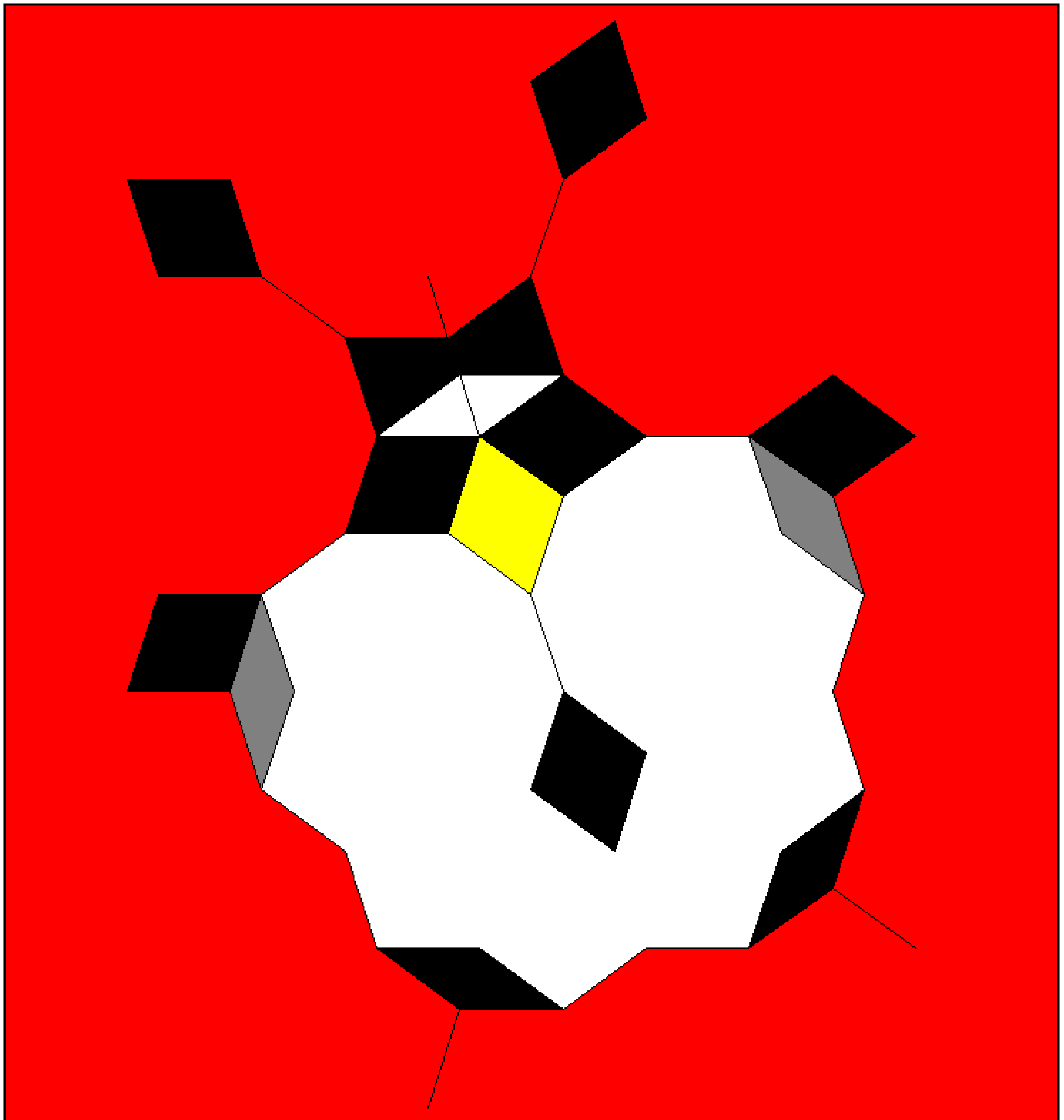
$\delta = 36^\circ$

A = F

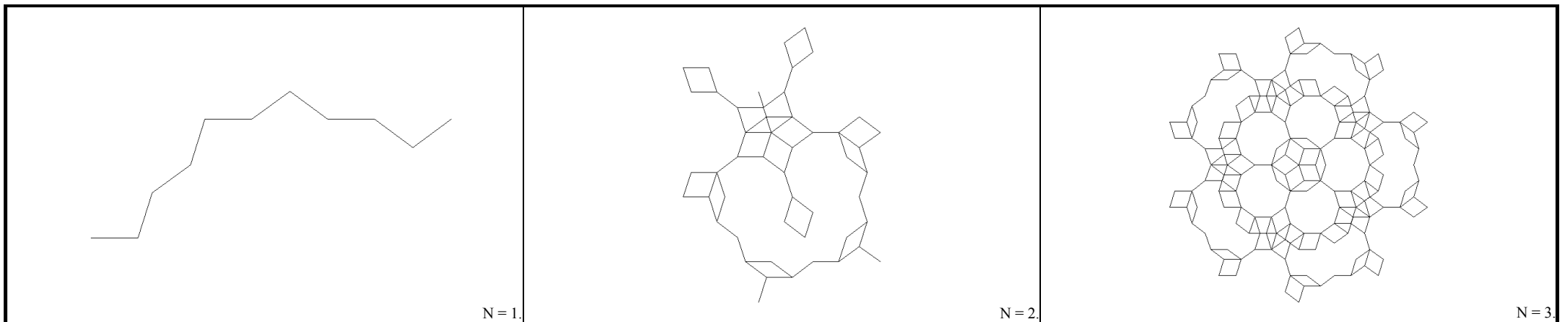
F = ! ++++++ FW -- FZ + FW -- FZZW ++ F - FZZW ++ F !

Z = ---

W = +



N=2.



N=1.

N=2.

N=3.

Double 10 - 2

Rosette. Last N = 3

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$\delta = 36^\circ$

A = F

F =! + + + + FV ++ FX - F + FXXV -- F !

F =! + FW -- FZ + F - FZZW ++ F !

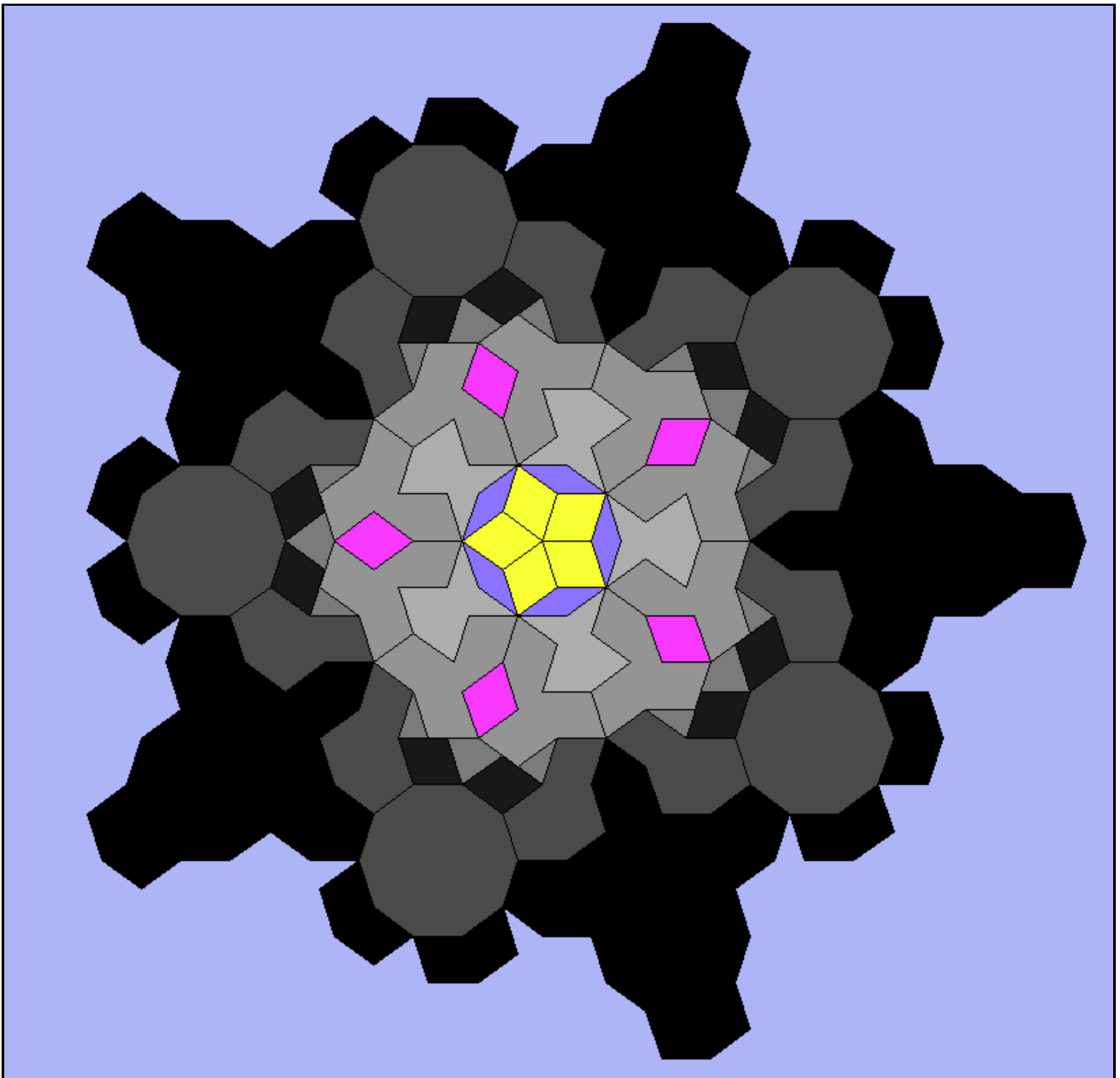
X = ++

V = --

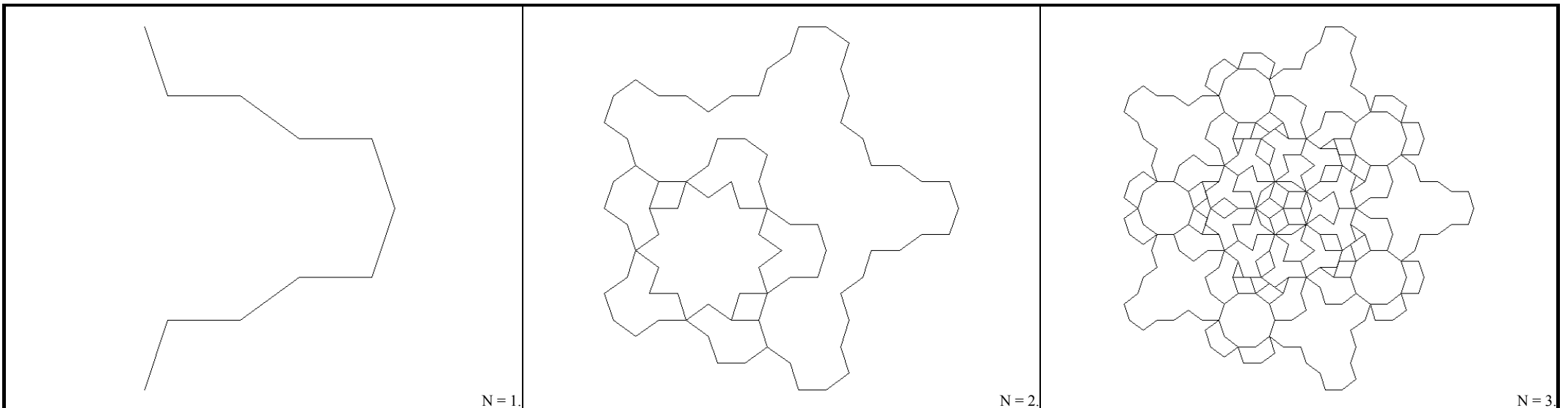
Z = --

W = +

(! = reverse directions: +, -)



N=3.



N=1.

N=2.

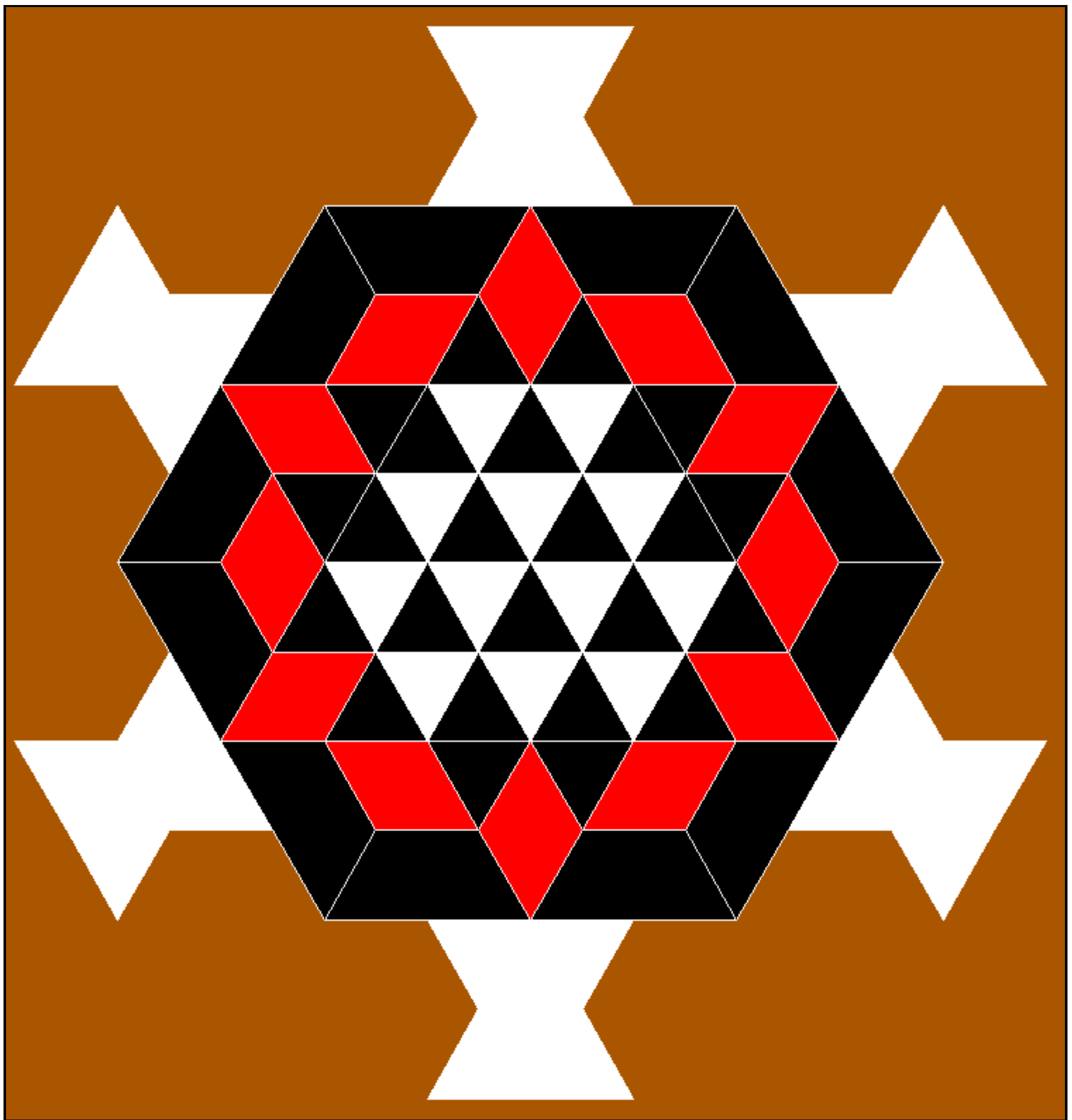
N=3.

Double 10 - 3

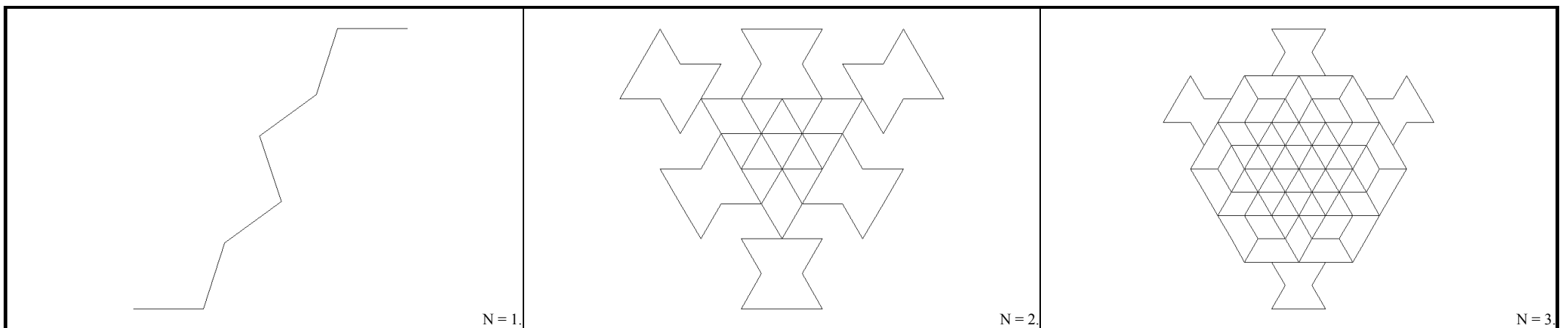
Rosette. Last N = 3
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$\delta = 36^\circ$
 $A = F$
 $F = ! - - FV ++ FX - F + FXXV - - F !$
 $F = ! - FW - - FZ + F - FZZW ++ F !$

$X = ++$
 $V = -$
 $Z = - -$
 $W = +$
 (! = reverse directions: +, -)



N = 4.



N = 1.

N = 2.

N = 3.

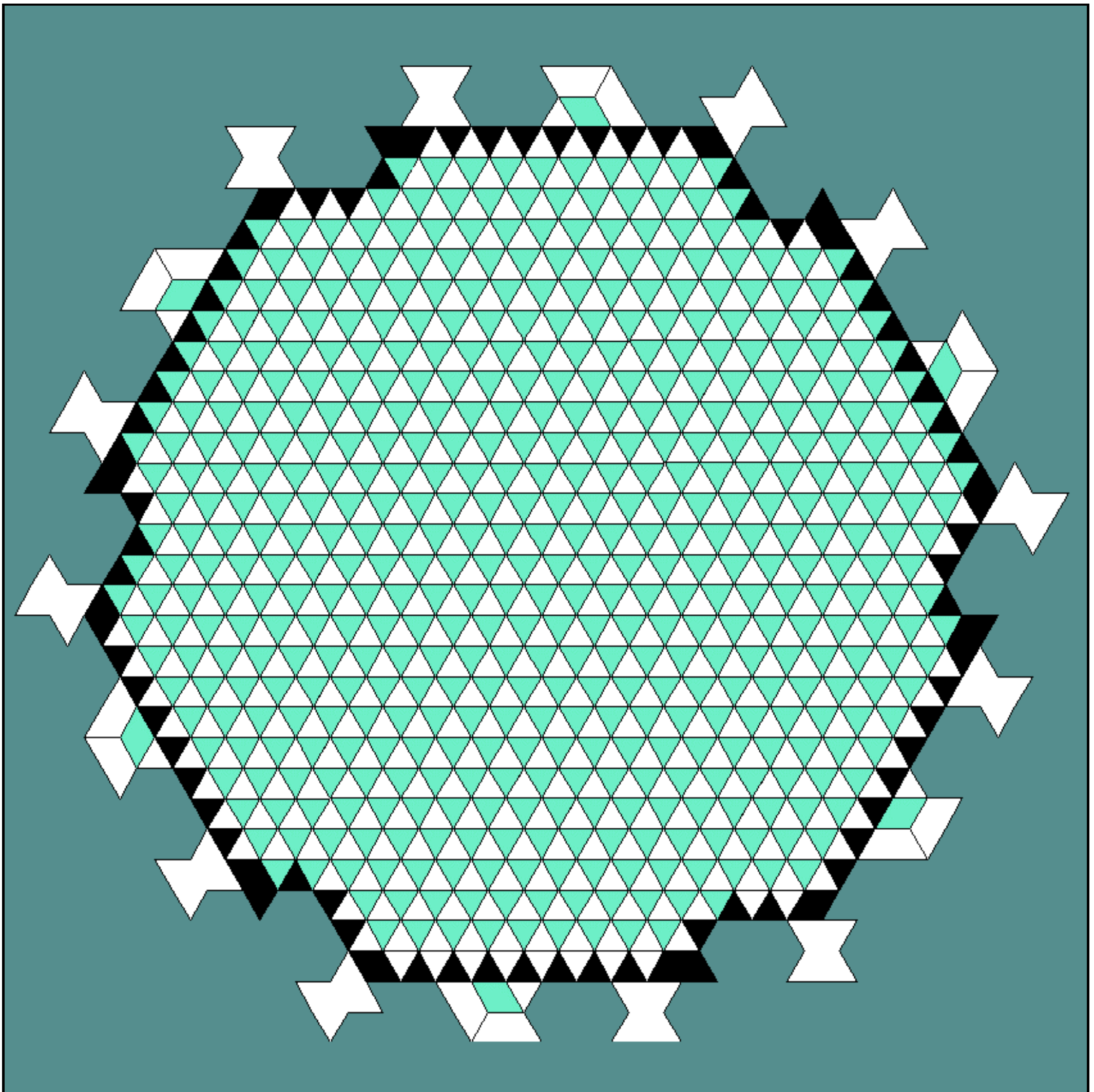
Double 6 -1

Rosette. Last N = 4
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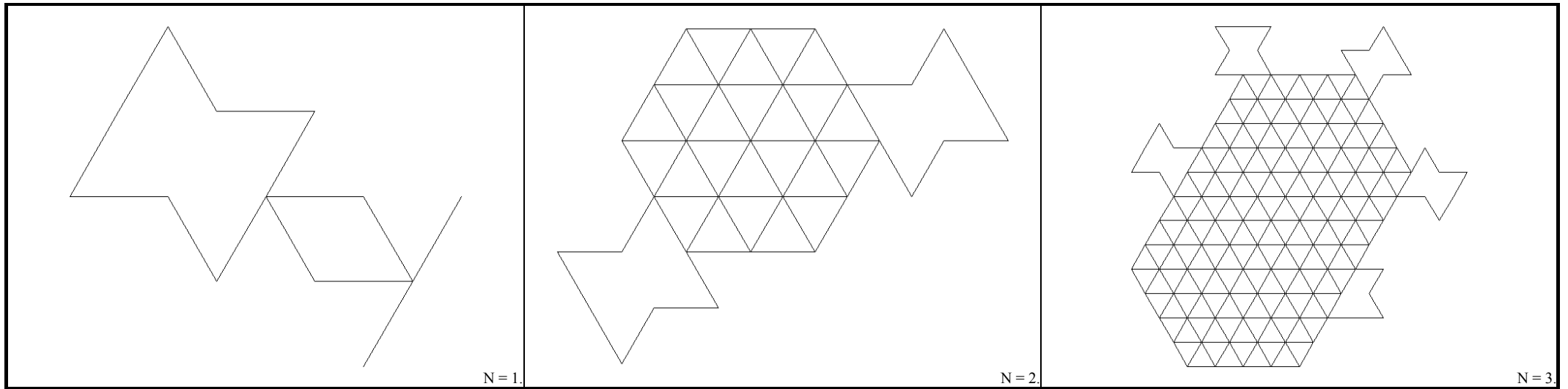
$\delta = 60^\circ$
 $A = F$
 $F = ! \text{---FVK++FXK-FVK++FXXVK--FK+FXXVK--FK} !$
 $F = ! \text{FWK--FZK+FWK--FZZWK++FK-FZZWK++FK} !$
 (! = reverse directions: +, -)

$X = ++$
 $V = -$
 $K = L$
 $L = --$

$Z = --$
 $W = +$



N = 5.



N=1.

N=2.

N=3.

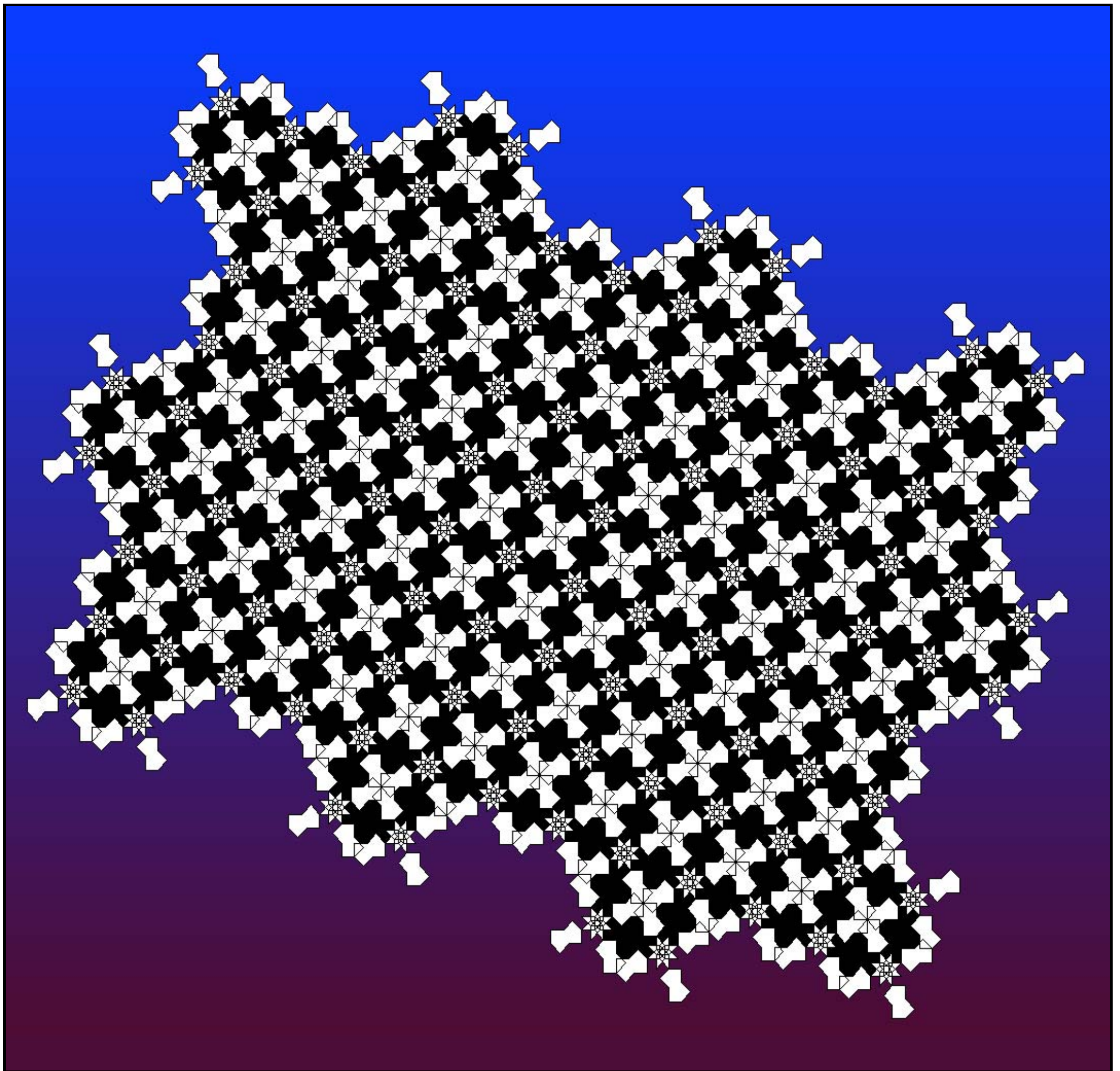
Double 6 -3

$\delta = 60^\circ$
 $A = F$
 $F = ! ++FVK++FXK-FVK++FXXVK--FK+FXXVK--FK !$
 $F = ! FWK--FZK+FWK--FZZWK++FK-FZZWK++FK !$
 (! = reverse directions: +, -)

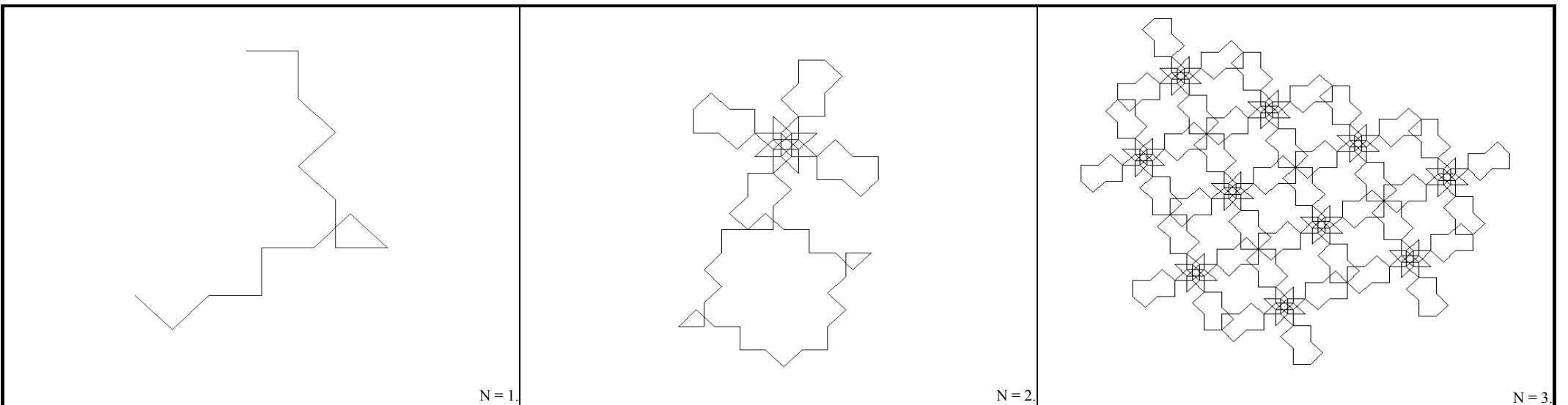
$X = ++$
 $V = --$
 $K = L$
 $L = ---$

$Z = --$
 $W = +$

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N = 5, fragment.



N = 1.

N = 2.

N = 3.

Double 8 - 11

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$\delta = 45^\circ$

A = F

F = ! FV ++ FX - FV ++ FXXV -- F + FXXV -- F !

F = ! --- FWK -- FZK + FWK -- FZZWK ++ FK - FZZWK ++ FK !

(! = reverse directions: +, -)

X = ++

V = --

Z = ---

W = +

K = L

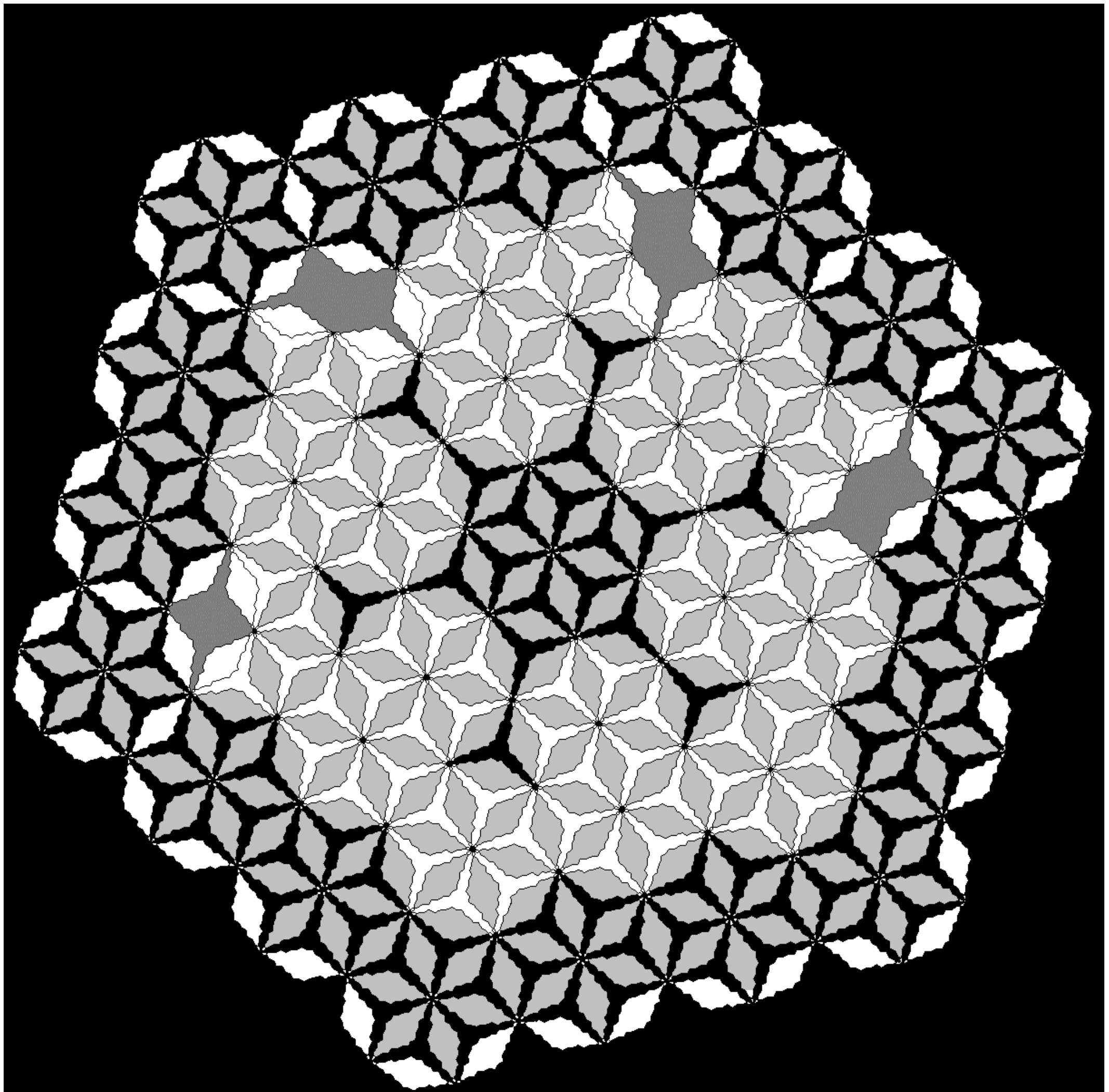
L = ---

P = R

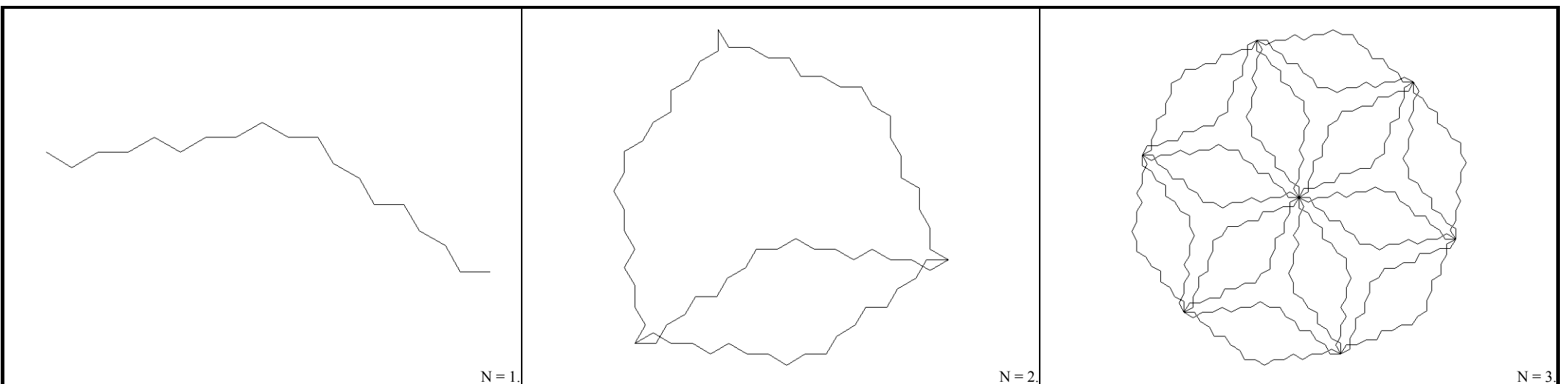
R = ---

Y = U

U = --U



N=5.



N=1.

N=2.

N=3.

Double 12 -16

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$\delta = 30^\circ$

A = F

F=! - - - - -FVK++FXK-FK+FXXVK--FVK++FXK-FK+FXXVK--FK !

F=! +FWK--FZK+FK-FZZWK++FWK--FZK+FK-FZZWK++FK !

(! = reverse directions: +, -)

X = ++

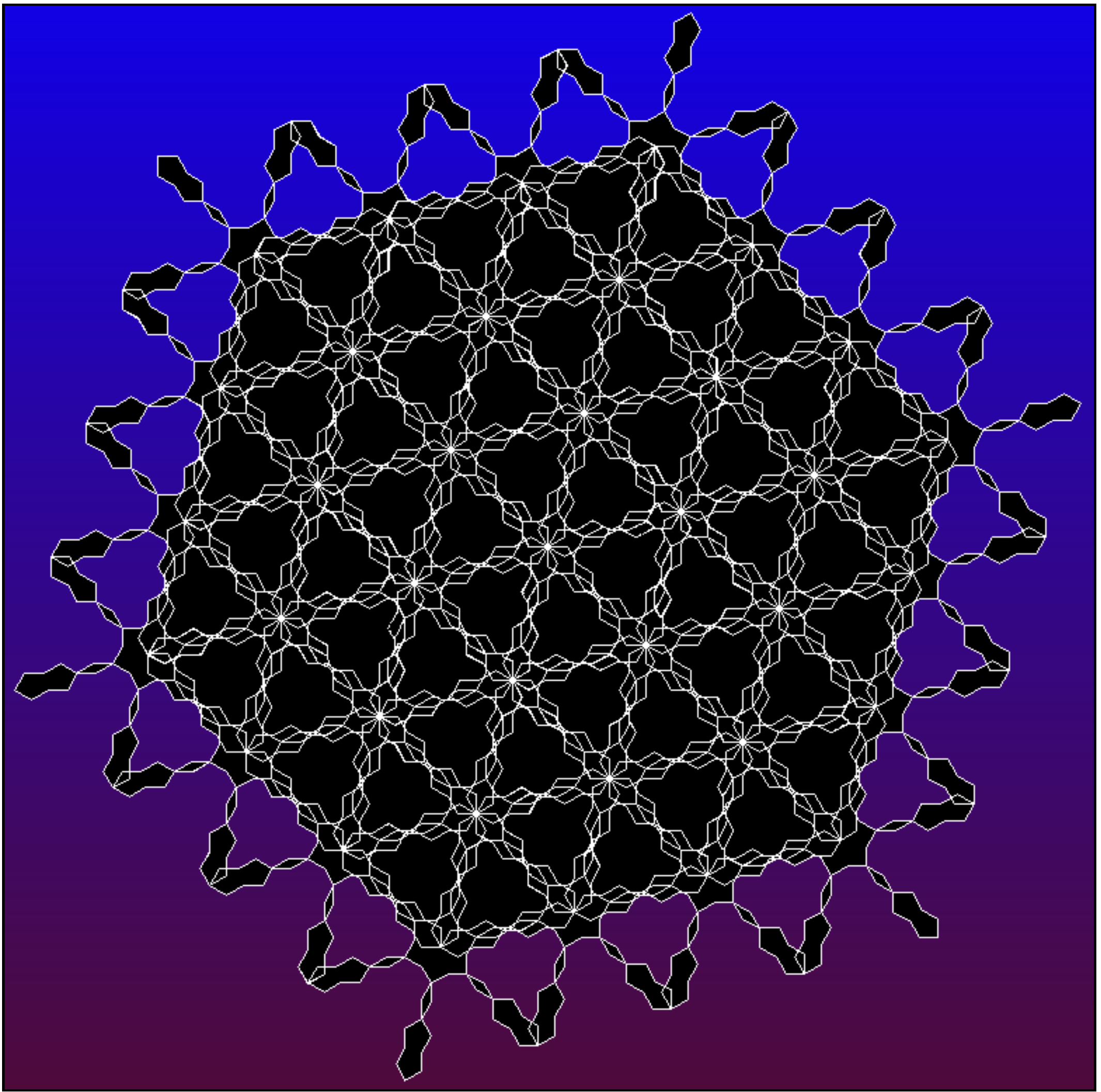
V = --

Z = --

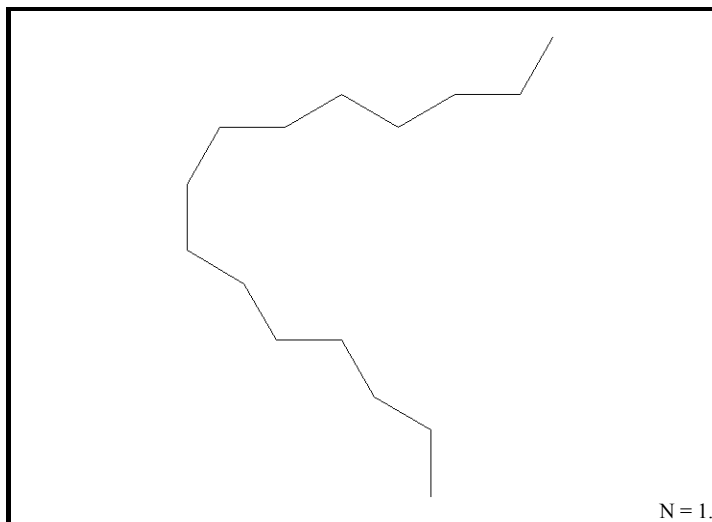
W = +

K = L

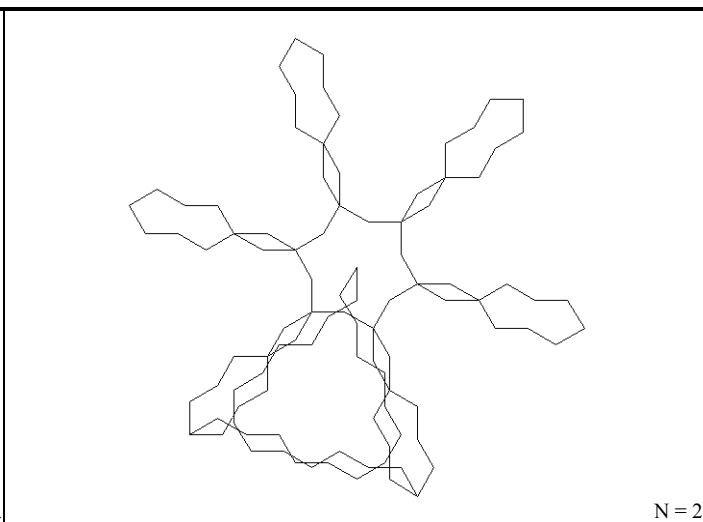
L = + + + +



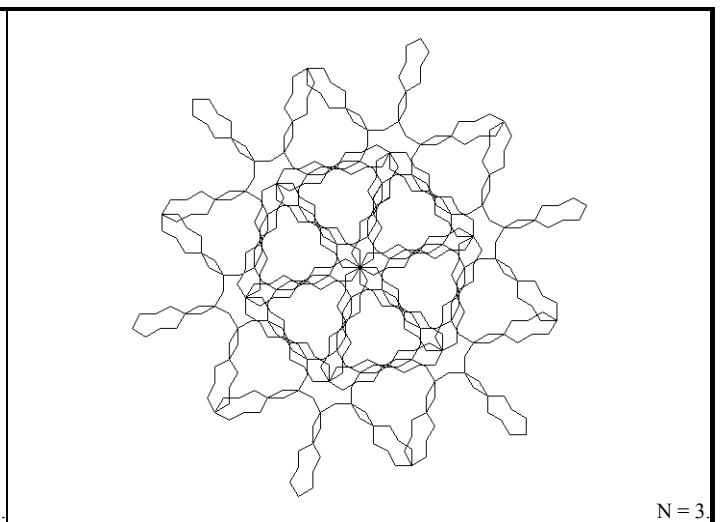
N = 5.



N = 1.



N = 2.



N = 3.

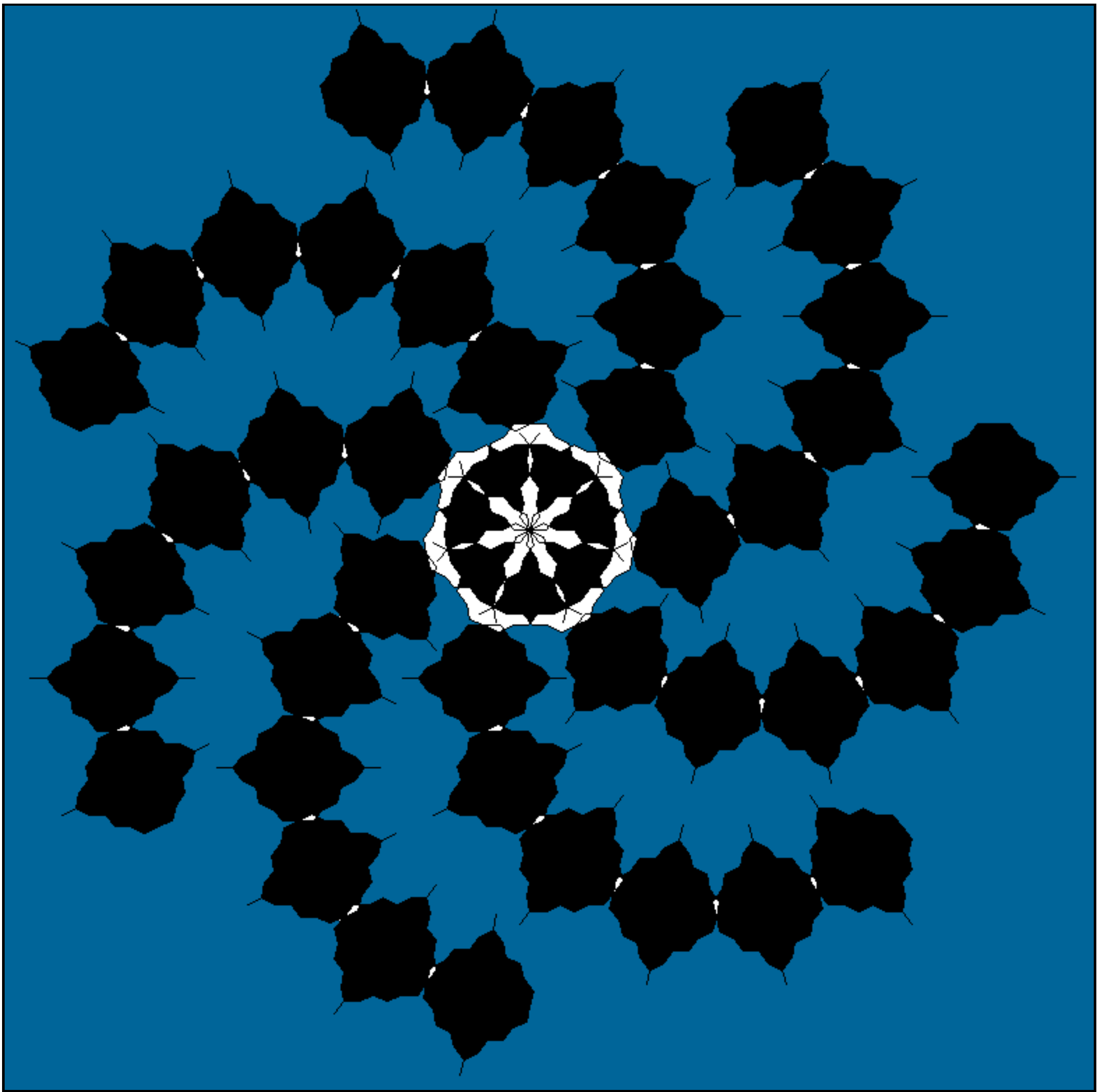
Double 12 - 8

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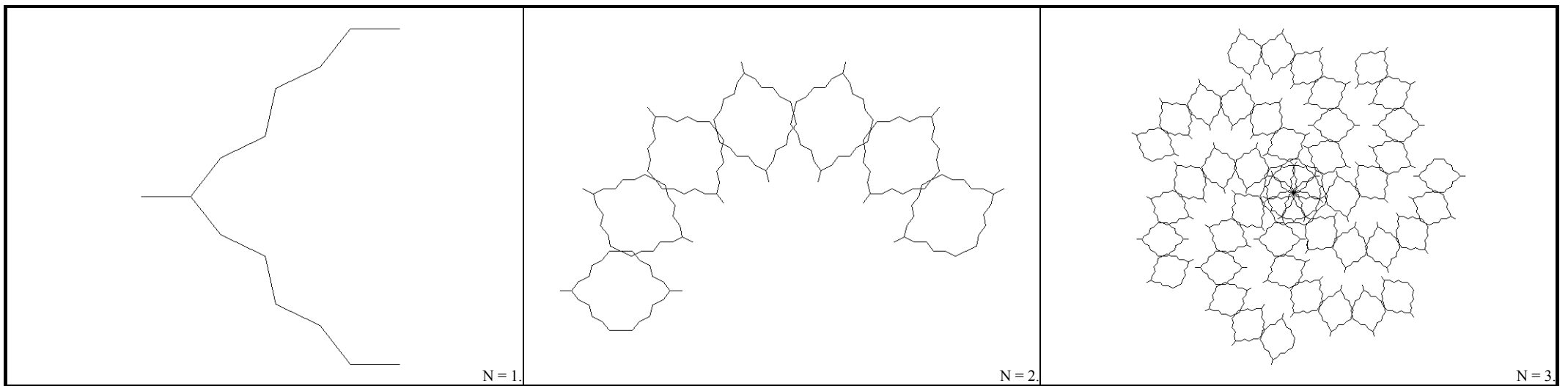
$\delta = 30^\circ$
 $A = F$
 $F = !++++FVK++FXK-FVK++FXXVK--FK+FXXVK--K!$
 $F = !-FWK--FZK+FWK--FZZWK++FK-FZZWK++FK!$
 (! = reverse directions: +, -)

$X = ++$
 $V = --$
 $K = L$
 $L = ++++++$

$Z = ---$
 $W = +$



N=3.



N=1.

N=2.

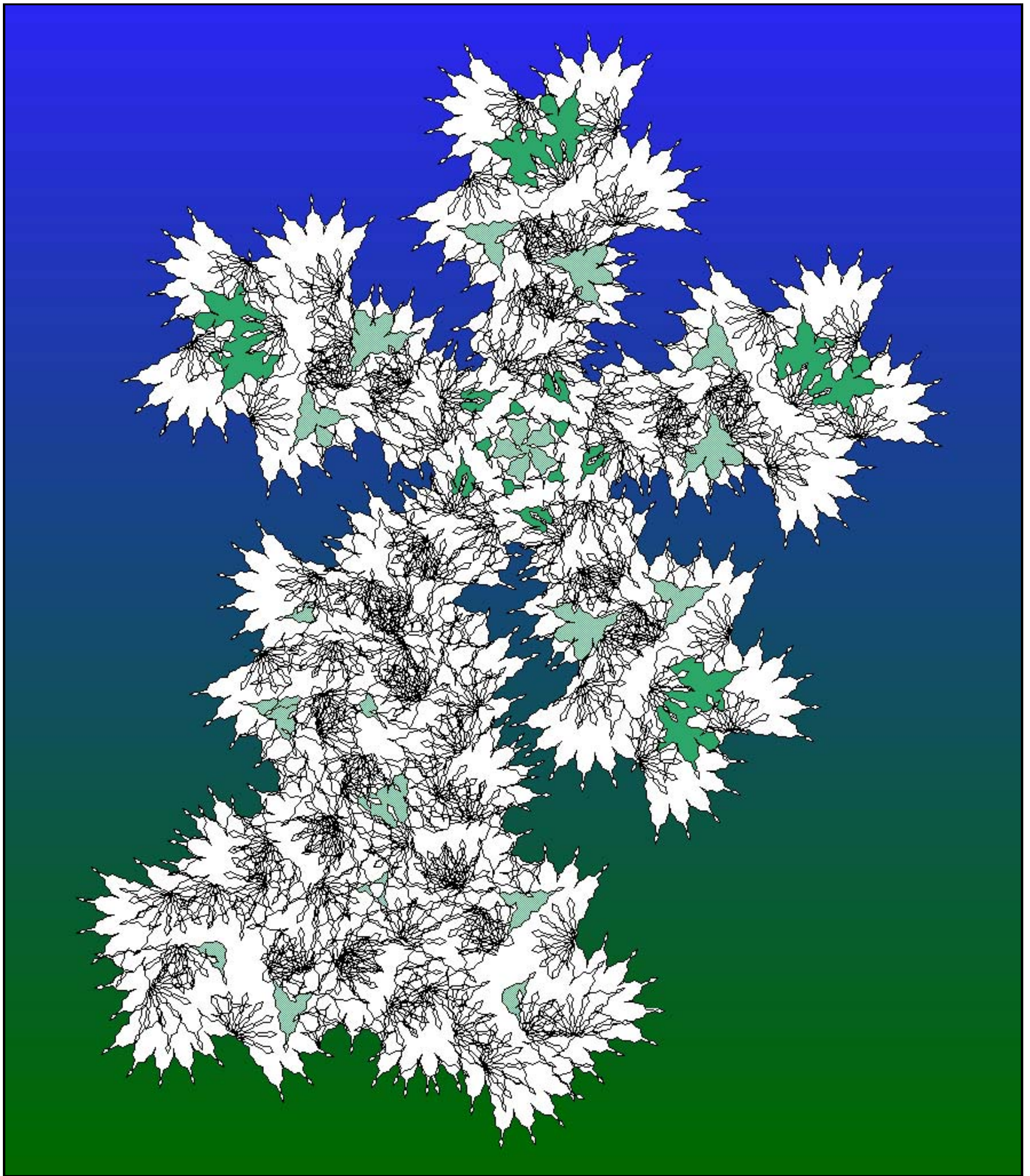
N=3.

Double 14 - 1

Rosette. Last N = 3
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A = F
 $\delta = 360 / 14^\circ$
 F = ! ++++++ FVK ++ FXK - FVK ++ FXXVK -- FK + FXXVK -- FK !
 F = ! ----- FWK -- FZK + FWK -- FZZWK ++ FK - FZZWK ++ FK !
 (! = reverse directions: +, -)

X = ++
 V = --
 Z = --
 W = +
 K = L
 L = +



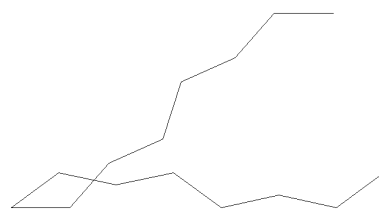
N=4.

Double 15 - 1

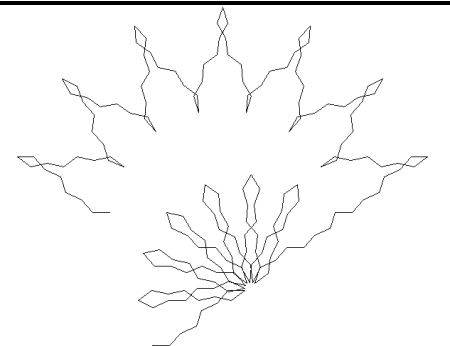
$\delta = 24^\circ$
 $A = F$
 $F = !+++++ FVK ++ FXK - FVK++FXXVK -- FK + FXXVK -- FK !$
 $F = !----- FWK -- FZK+FWK -- FZZWK++FK- FZZWK++FK !$
 (! = reverse directions: +, -)

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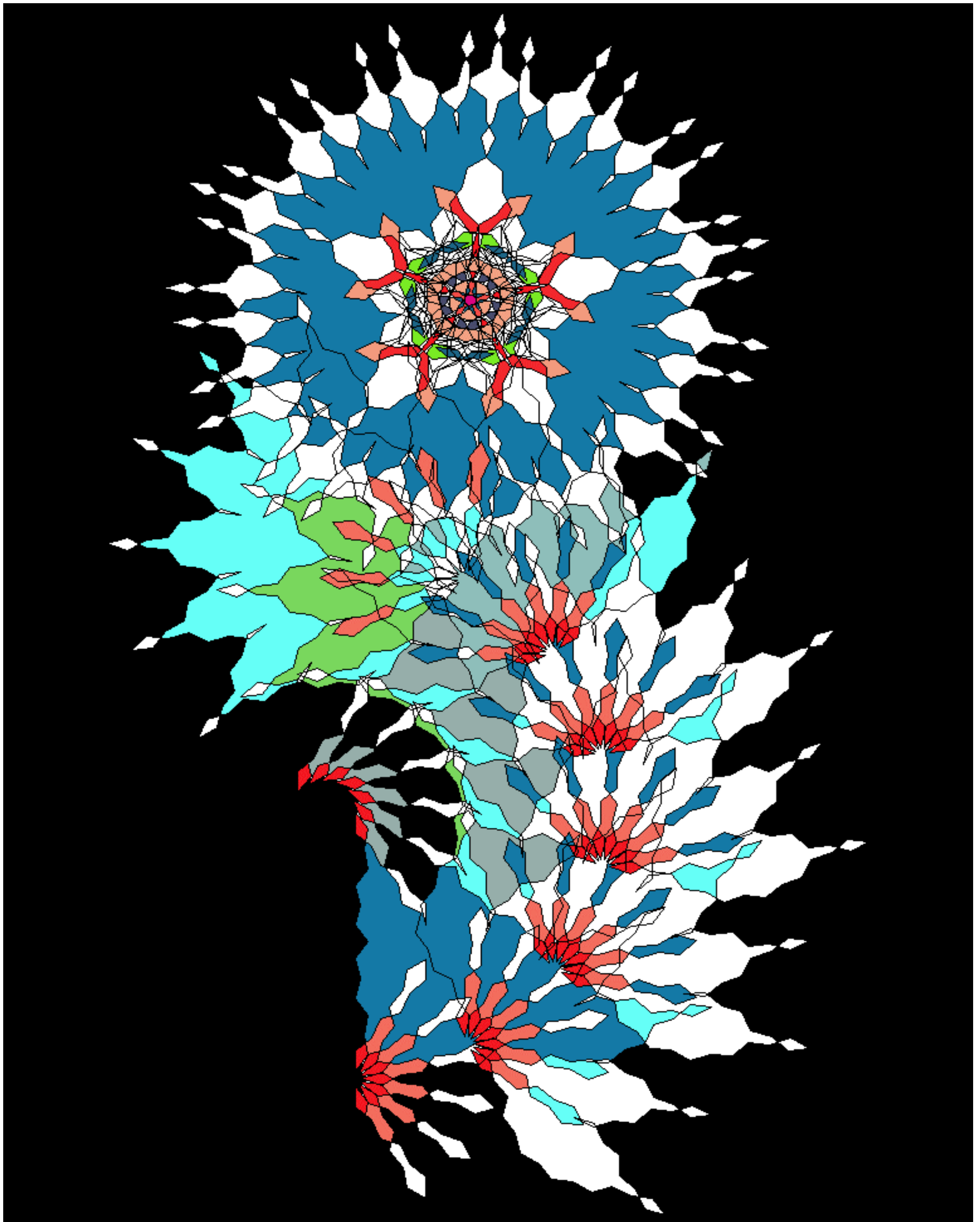
$X = ++$
 $V = --$
 $Z = --$
 $W = +$
 $K = L$
 $L = ++$



N=1.



N=2.



N=3.

Double 15 - 2

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$\delta = 24^\circ$

A = F

F = ! ++++++ FVK ++ FXK - FVK ++ FXXVK -- FK + FXXVK -- FK !

F = ! ----- FWK -- FZK + FWK -- FZZWK ++ FK- FZZWK ++ FK !

(! = reverse directions: +, -)

X = ++

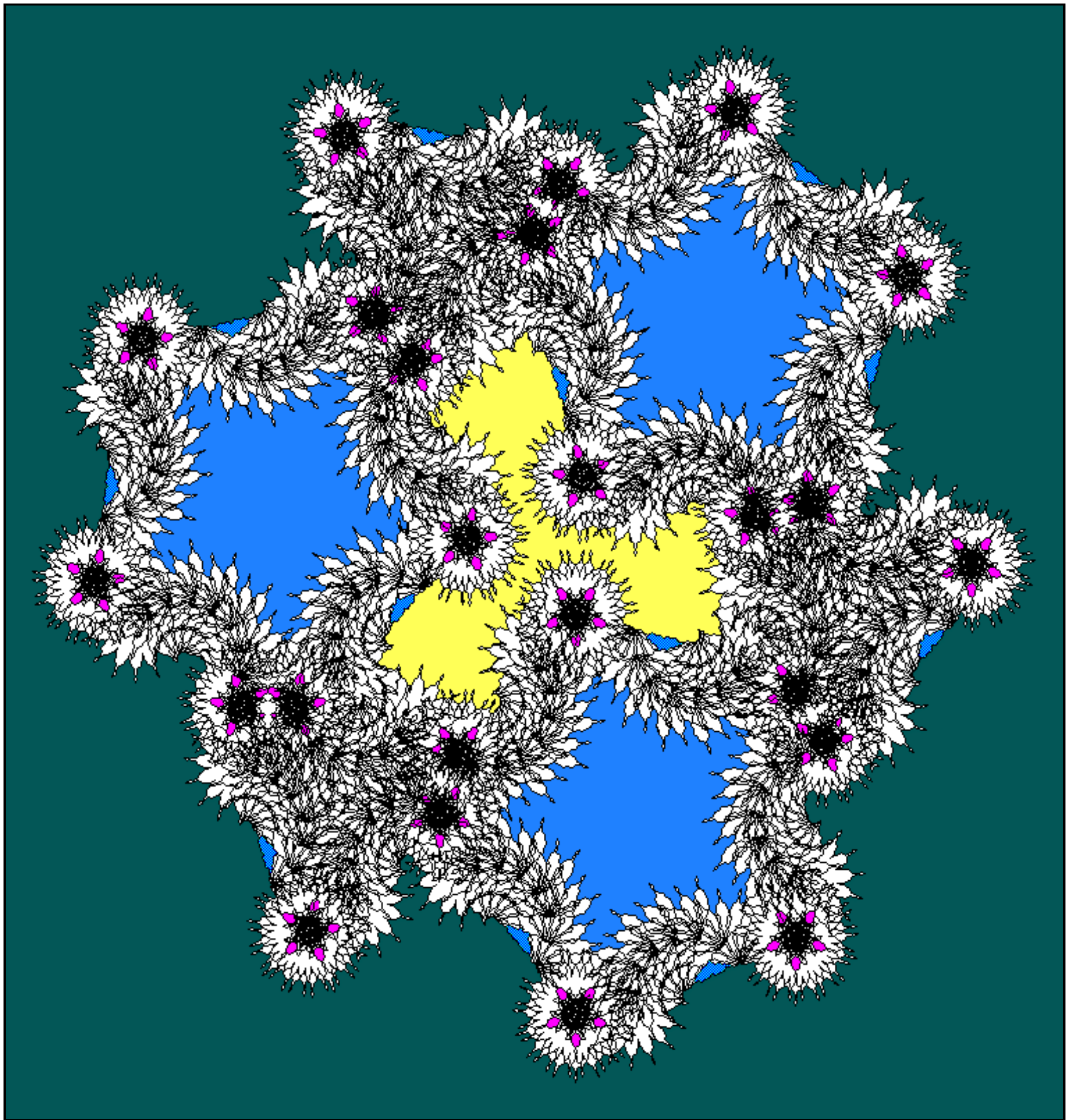
V = -

Z = --

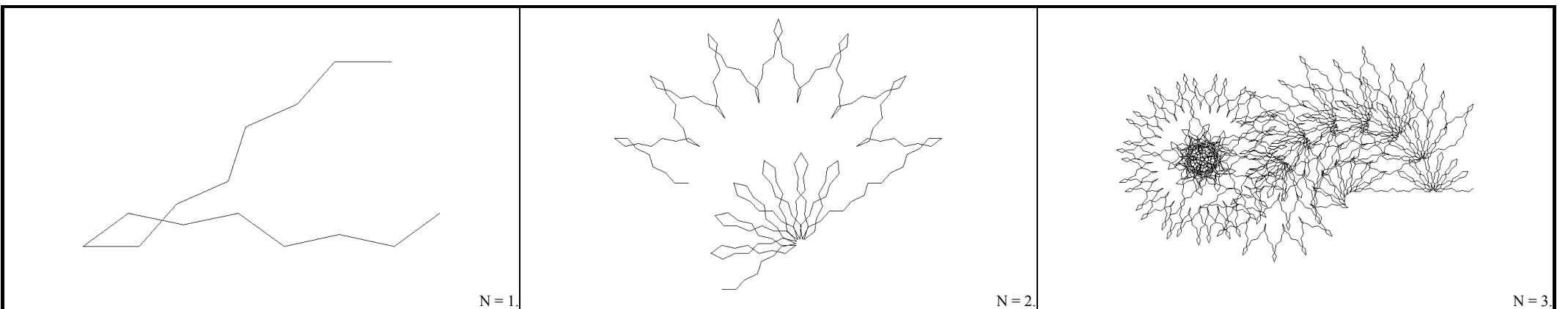
W = +

K = L

L = --



N = 5, fragment.



N=1.

N=2.

N=3.

Double 15 - 2

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$\delta = 24^\circ$

A = F

F = ! +++++ FVK ++ FXK - FVK ++ FXXVK -- FK + FXXVK -- FK !

F = ! ----- FWK -- FZK + FWK -- FZZWK ++F K- FZZWK ++ FK !

(! = reverse directions: +, -)

X = ++

V = --

Z = --

W = +

K = L

L = --



N=3.

Double 15 - 3

$\delta = 24^\circ$

A = F

F = !+++++ FV ++ FX - FV ++ FXXV -- F + FXXV -- F!

F = Y! ----- FW -- FZ + FW -- FZZW ++F - FZZW ++ F!

X = ++

V = --

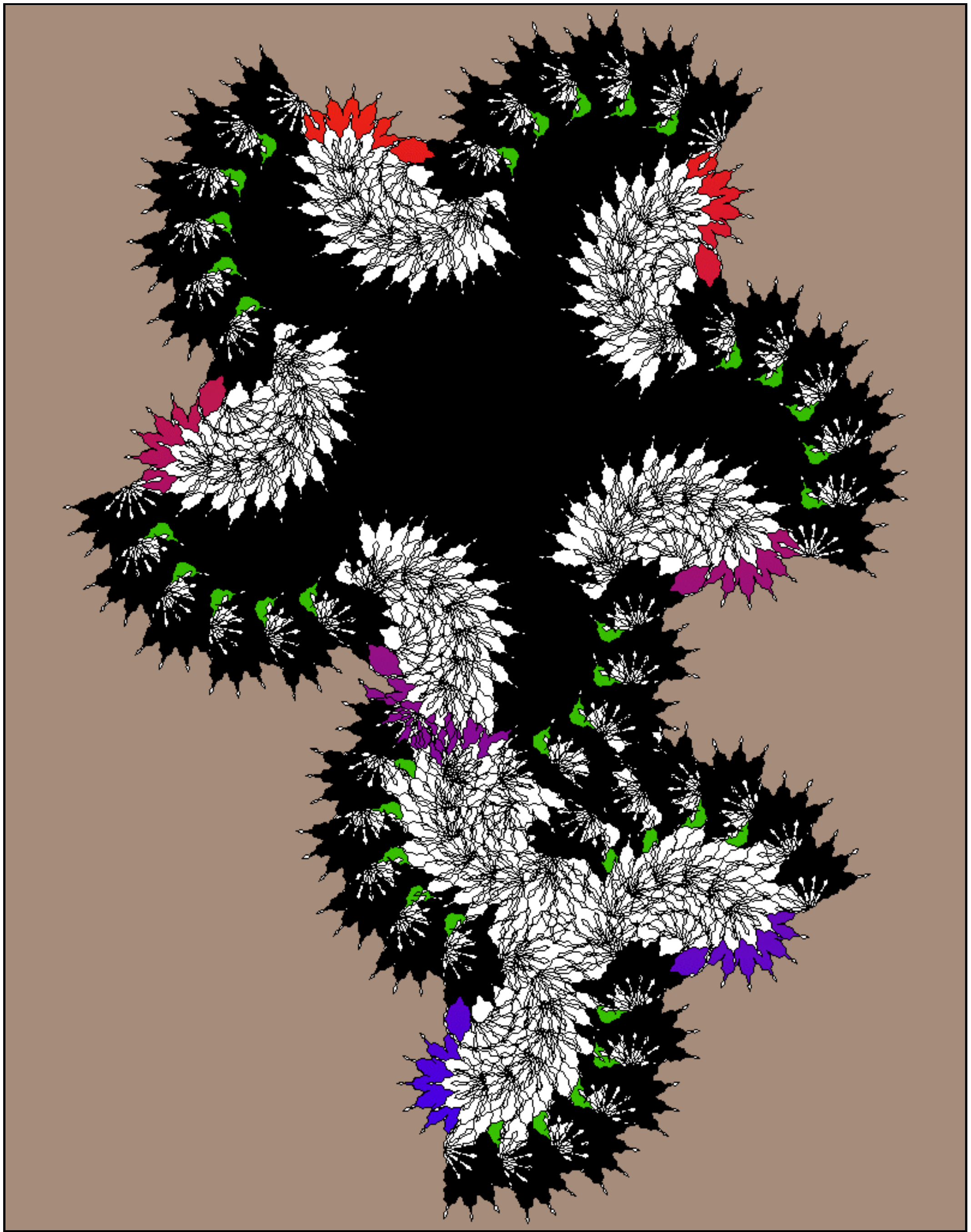
Z = --

W = +

Y = PYY

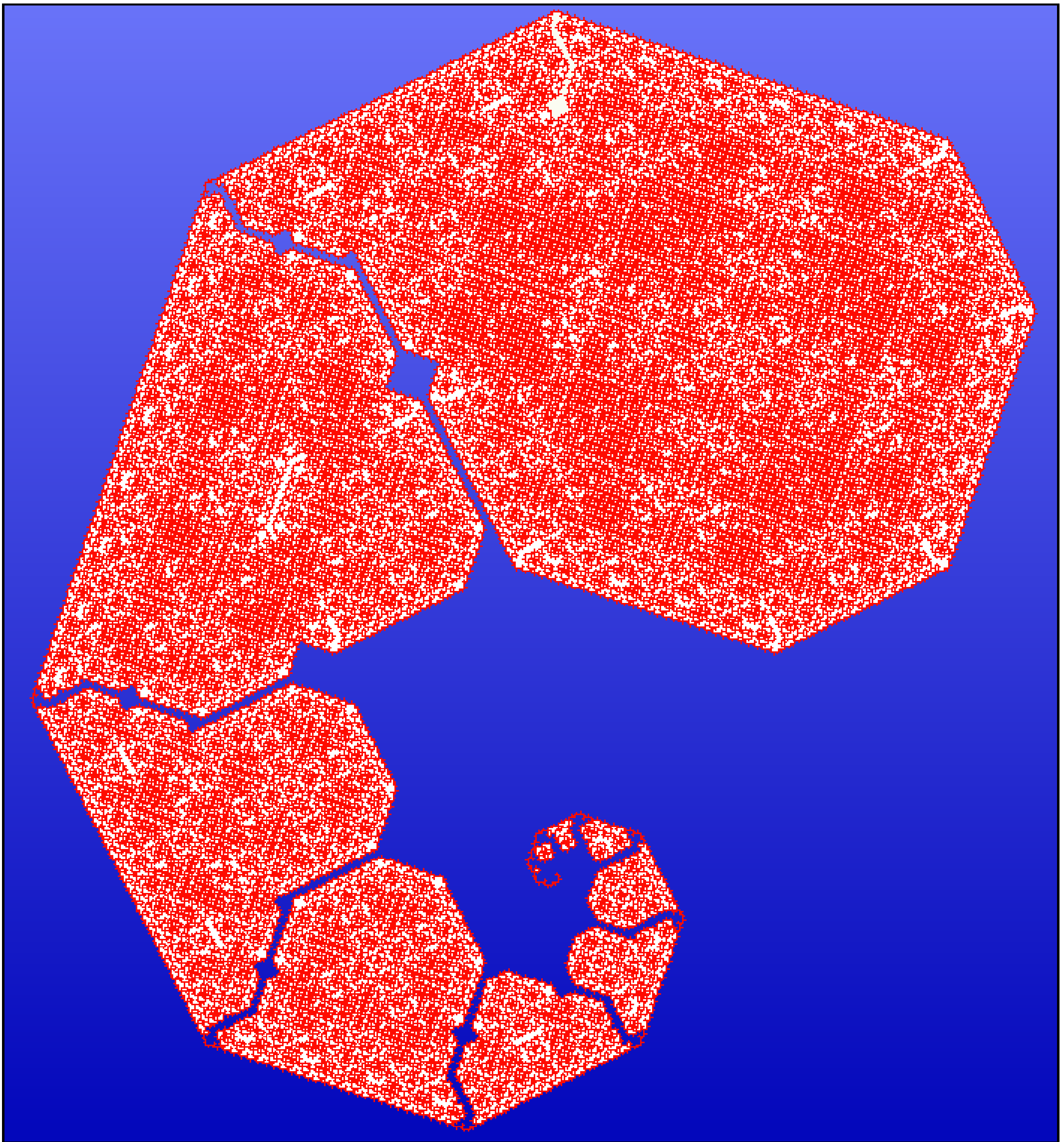
P = -----

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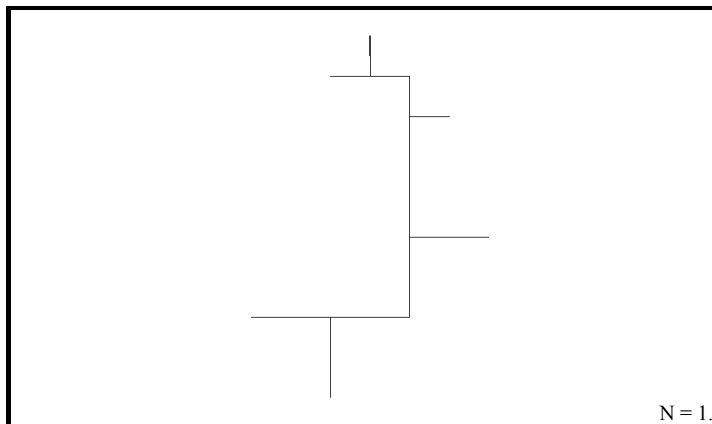


N=4.

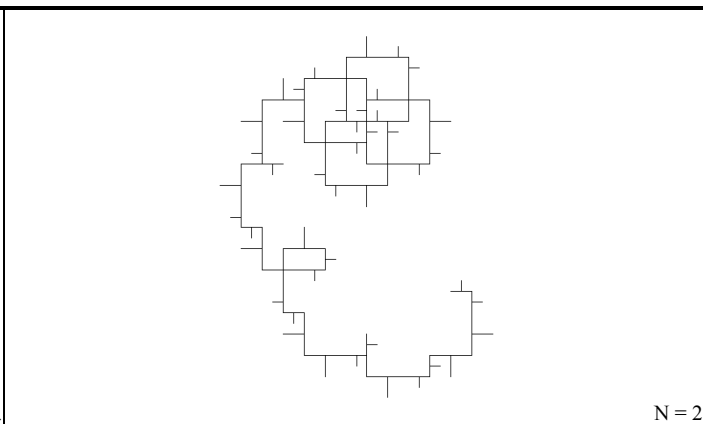
<p>Double 15 - 3</p> <p>© G. Pernecky, 1994</p>	<p>$\delta = 24^\circ$ A = F F = !+++++ FV ++ FX - FV ++ FXXV -- F + FXXV -- F ! F = Y!----- FW -- FZ + FW -- FZZW ++F - FZZW ++ F ! X = ++</p> <p>(! = reverse directions: +, -)</p>	<p>V = - Z = -- W = + Y = PYY P = ----</p>
---	--	--



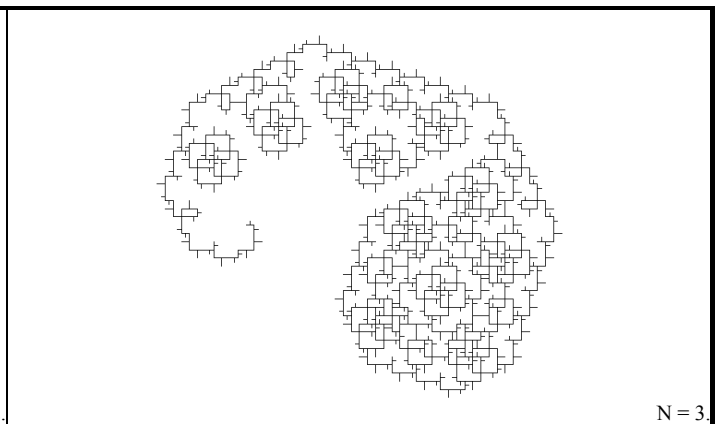
N=4.



N=1.



N=2.



N=3.

Horn

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$\delta = 90^\circ$

A = F

$F \rightarrow F + F - - F + F 0 - F + F - - F + FFF + FF - - FF + FF - FF + FF - - FF + FF$