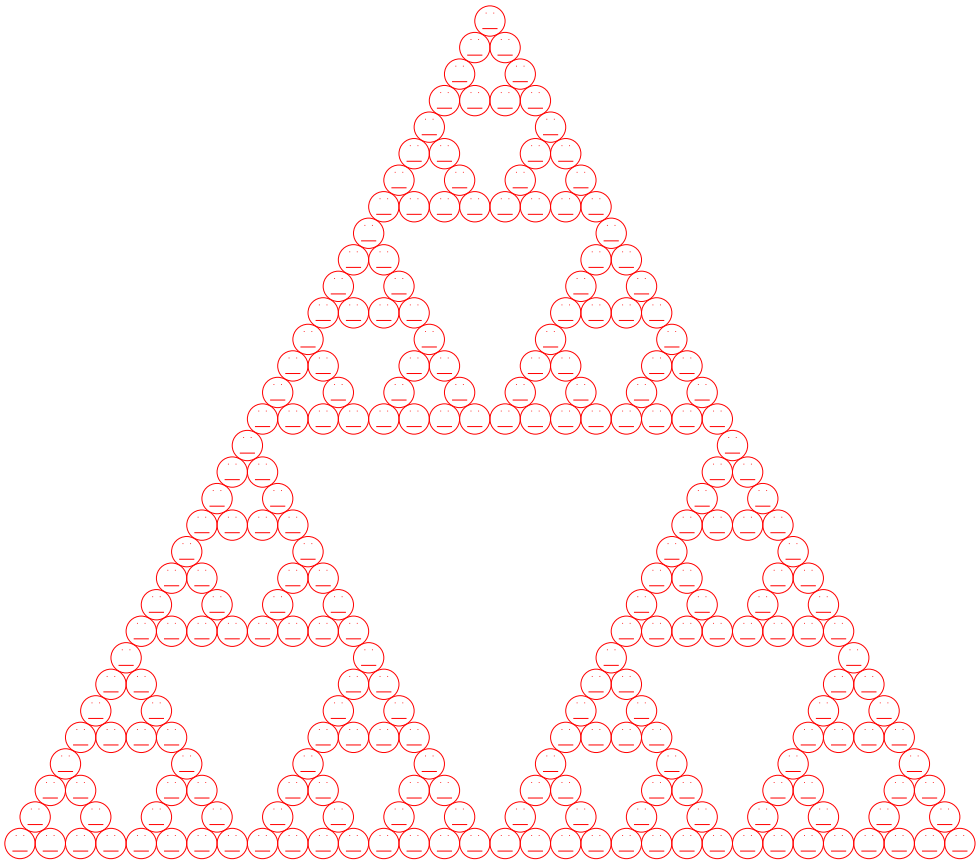
Estas imágenes han sido realizadas con el programa PATOO (Programa para la Aplicación de Traslaciones y Otros Operadores) por alumnos de 4^0 ESO del IES Ágora (Alcobendas – Madrid), en el curso 2002-03.

El programa ha sido escrito por Javier Rodríguez Laguna, profesor de matemáticas del citado IES y adscrito al Instituto de Física Teórica (IFT - CSIC/UAM). Puede ser descargado bajo licencia GPL de `http://gdlang.sourceforge.net/patoo`.

These images were carried out with the program PATOO (Program for the Application of Translations and Other Operators) by high school students (15-16 years old) from IES Ágora (Alcobendas – Madrid), in the winter term of 2002-03.

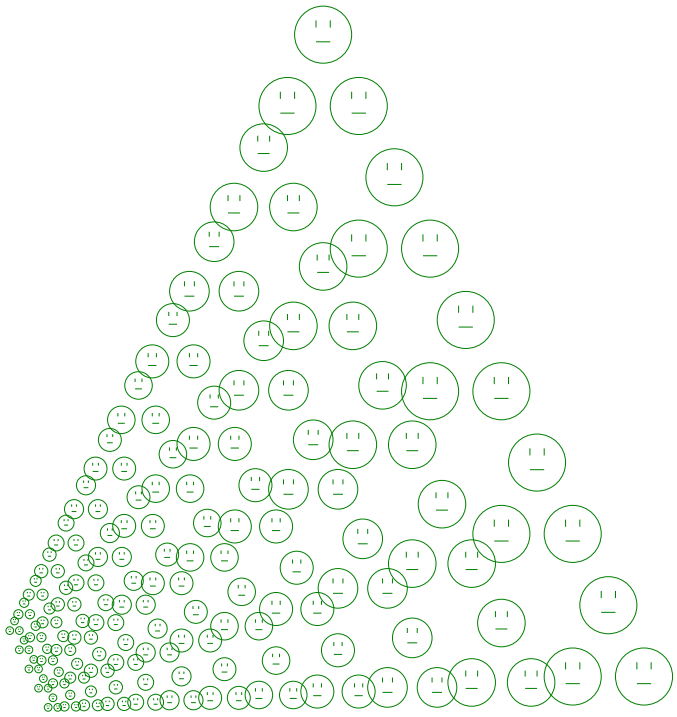
The program was written by Javier Rodríguez-Laguna, maths teacher at the formerly said IES and collaborator of the Instituto de Física Teórica (IFT - CSIC/UAM). It may be downloaded under the GPL licence from `http://gdlang.sourceforge.net/patoo`.

Pablo Gómez y Pablo Sánchez (4^0C)



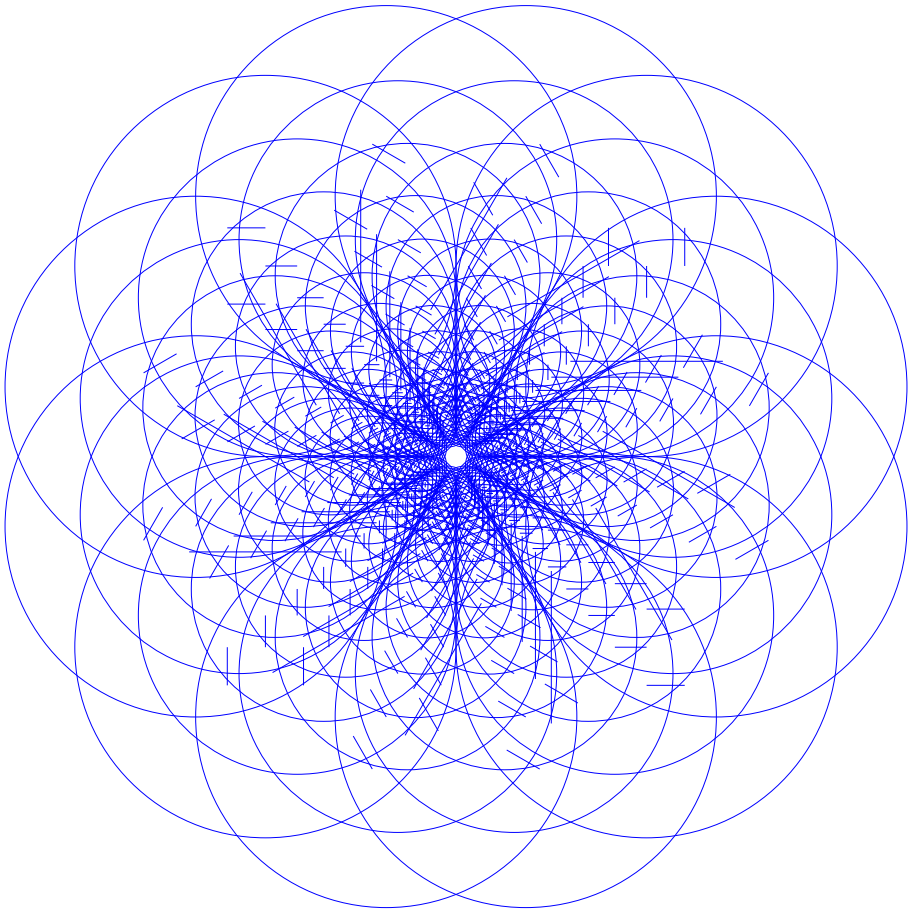
```
r=(-50,-50)(50,-50)+(-25,50)(-25,55)+(25,50)(25,55)+C(0,0,100)
r
R2=(I+T(100,0)+T(50,87.5))*S(0.5)*r
R3=(I+T(100,0)+T(50,87.5))*S(0.5)*R2
R4=(I+T(100,0)+T(50,87.5))*S(0.5)*R3
R5=(I+T(100,0)+T(50,87.5))*S(0.5)*R4
R6=(I+T(100,0)+T(50,87.5))*S(0.5)*R5
R6
quit
```

José María Martín y Silvia Sampalo (4^0C)



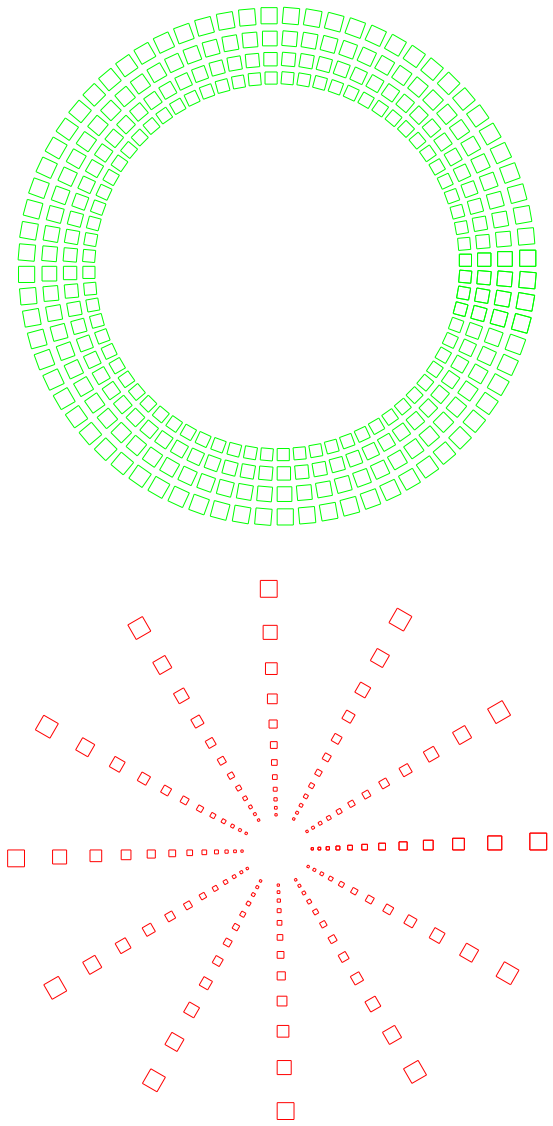
```
r=C(25,25,20)+(20,20)(30,20)+(20,35)(20,30)+(30,35)(30,30)
s=(S(0.5)+S(0.5)*T(50,0)+S(0.5)*T(25,50))*r
n=(T(50,0)+T(25,50))*s
g=(T(50,0)+T(25,50))*n
j=(T(50,0)+T(25,50))*g
l=(T(50,0)+T(25,50))*j
k=(I+S(1.2))^11*l
T(-200,-200)*S(0.2)*k
quit
```

Luis N. García y Francisco J. García (4^0C)



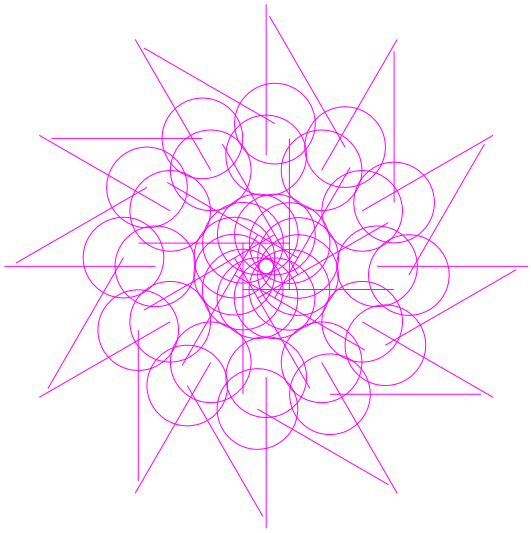
```
r=C(50,50,50)+(40,60)(40,50)+(60,60)(60,50)+(30,25)(70,25)
x=(I+R(30))^90*r
y=(I+S(1.2))^11*x
y
quit
```

Francisco García-Calvo (4ºC)

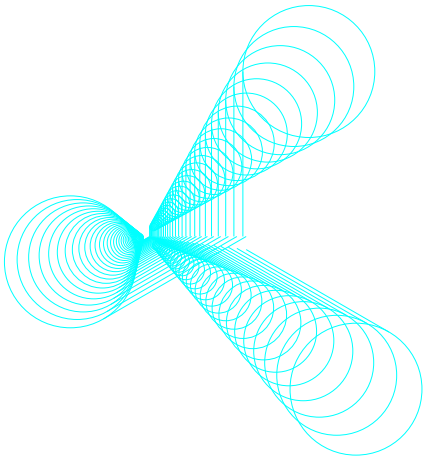


```
a=(80,5)(80,0)(75,0)(75,5)(80,5)
b1=(I+R(5))^75*a
c1=(I+S(1.1))^3*b1
b3=(I+R(90))^4*a
c3=(I+S(1.2))^11*b3
b4=(I+R(30))^30*a
c4=(I+S(1.2))^11*b4
c1
c4
quit
```

Francisco García-Calvo (4^0C)

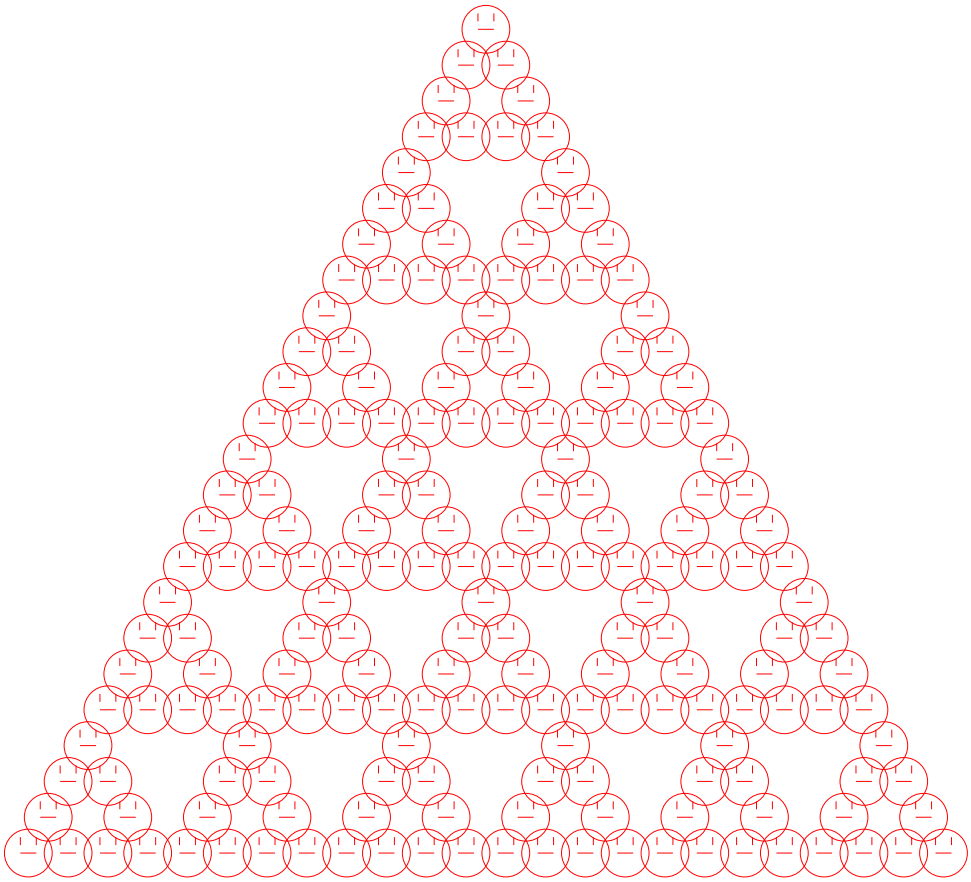


```
r=C(25,25,20)+(25,25)(25,100)
z=T(80,0)*(I+R(120)+R(240))*r
a=T(-105,30)*z
c2=(I+R(30))^11*a
c2
quit
```



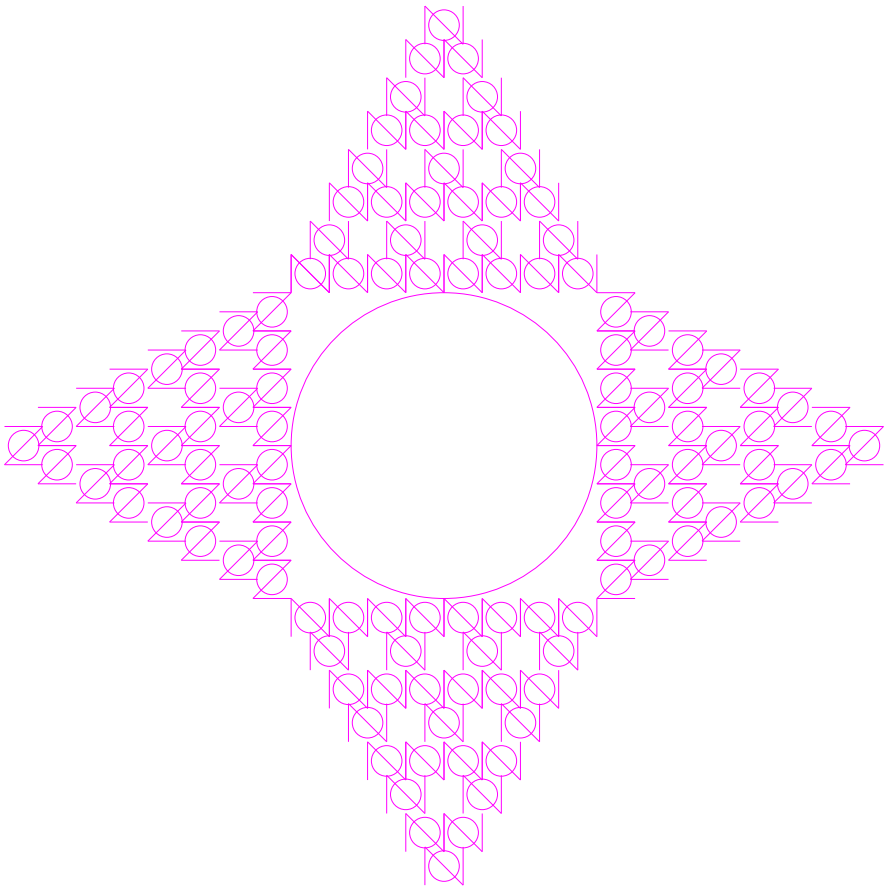
```
a=C(25,25,10)+(15,25)(15,0)
b=(I+(T(23,11)*R(120))+(T(23,-13)*R(240)))*a
c=(I+S(1.1))^30*b
c
quit
```

Álvar Martín y Javier Burgués (4ºC)



```
c=C(0,0,15)+(-5,5)(-5,10)+(5,5)(5,10)+(-5,0)(5,0)
f=(I+T(25,0)+T(12.5,22.5))*c
k=(I+T(50,0)+T(25,45))*f
T(-150,-150)*S(0.5)*(I+T(100,0)+T(50,90))^5*k
quit
```

Izhar Martín y María Luisa Jiménez (4^0C)



```
r=(0,0)(0,50)(50,0)(50,50)+C(25,25,20)
s=(I+T(25,43.75)+T(50,0))*r
f=(I+T(100,0)+T(50,93.75))^3*s
d=(I+R(90,200,-200))^4*f
g=C(200,-200,200)
h=d+g
h=S(0.3)*h
h
quit
```