

How to program geometrical art in programming language LOGO?

BASIC

FD – forward

BK – backward

RT – right

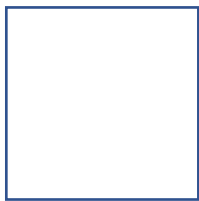
LT – left

CS – clear screen

With each command must be number written, e.g. RT 90.

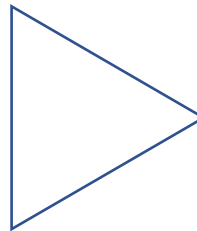
Example 1:

```
FD 50 RT 90
FD 50 RT 90
FD 50 RT 90
FD 50 RT 90
```



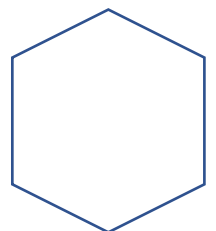
Example 2:

```
FD 50 RT 120
FD 50 RT 120
FD 50 RT 120
```



Example 3:

```
FD 50 RT 60
FD 50 RT 60
FD 50 RT 60
FD 50 RT 60
FD 50 RT 60
FD 50 RT 60
```



Turn left or right in regular shapes: $360/\text{number of corners}$

Easier programming regular shapes with loop REPEAT:

Example 4: REPEAT 4[FD 50 RT 90]

```
– write it in Edall:   TO SHAPE :N :D
                        CS
                        REPEAT :N[FD :D RT 360/:N]
                        END
```

- after File - Save and Exit run program with numbers :N (how many corner shape has) and :D (how long side of shape is) e.g. Shape 5 75

- try few times with different numbers

EASY GEOMETRICAL ART

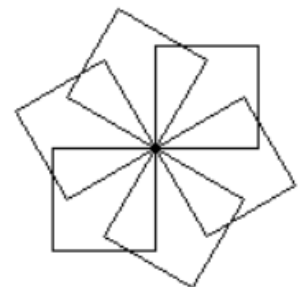
Task 1: Make a program according to rules:

- name of the program is ART1

- the basic shape is a square with side long 50

- there are a total of 6 squares properly arranged in a circle

- the squares touch at one common point, the starting point of the drawing



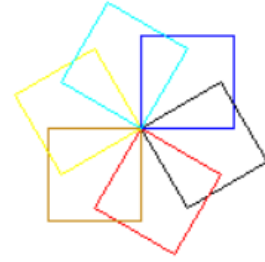
Solution:

TO ART1

CS

```
REPEAT 6[REPEAT 4[FD 50 RT 90] RT 360/6]
```

END



Task 2: Add some colour

- use command SETPC RANDOM number

- add this command in your ART1 program

TO ART1

CS

```
REPEAT 6[SETPC RANDOM 10 REPEAT 4[FD 50 RT 90] RT 360/6]
```

END

Task 3: BE CREATIVE 😊

- implement what have you learned and make beautiful creative geometrical art

Suggestions:

- use Example 4

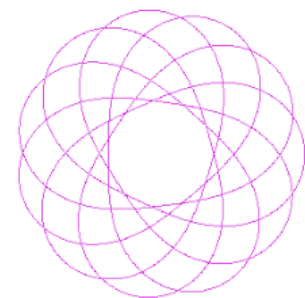
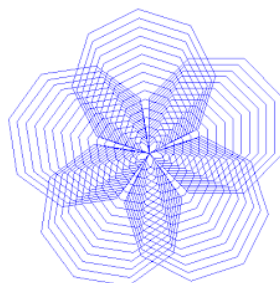
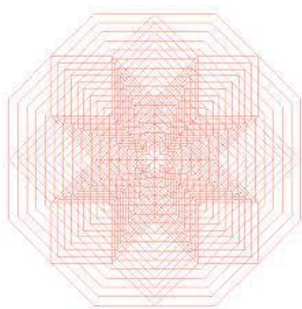
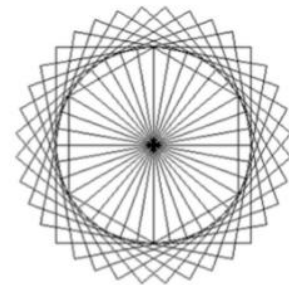
- use random colour

- use different number of shapes

- try to move shape before rotating it

- if you wish to add some circles, command is CIRCLE number

- upload best drawing you can into a Padlet



Try some examples from: <http://www.mathcats.com/gallery/15wordcontest.html>