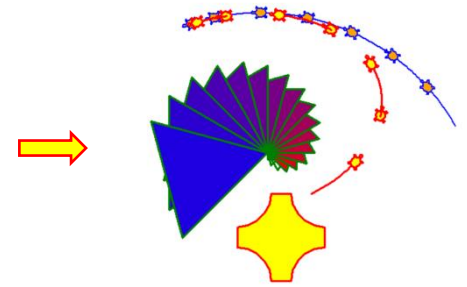


turtleの使い方

②python -m turtle を入力

アニメーション実行



```
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

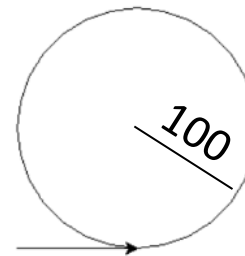
PS C:\Users\Y\ > python -m turtle
```

```
PS C:\Users\Y\ > python
Python 3.7.1 (v3.7.1:260ec2c36a,
Type "help", "copyright", "credi
>>> from turtle import *
>>> forward(100)
>>>
```

100

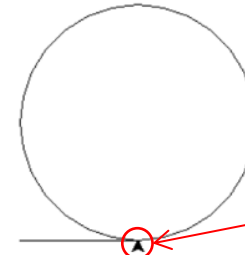
③forward(100)

```
PS C:\Users\Y\ > python
Python 3.7.1 (v3.7.1:260ec2c36a
Type "help", "copyright", "cre
>>> from turtle import *
>>> forward(100)
>>> circle(100)
>>>
```



④circle(100)

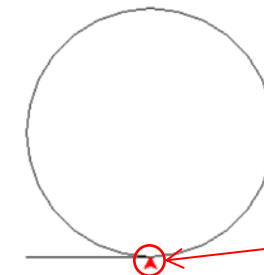
```
PS C:\Users\Y\ > python
Python 3.7.1 (v3.7.1:260ec2c36a
Type "help", "copyright", "cred
>>> from turtle import *
>>> forward(100)
>>> circle(100)
>>> left(90)
>>>
```



⑤left(90)

矢印が上を向いています

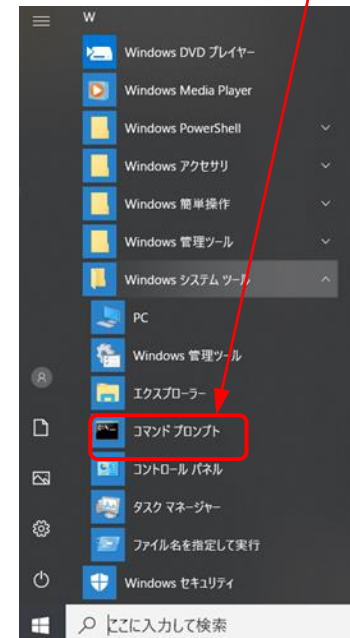
```
PS C:\Users\Y\ > python
Python 3.7.1 (v3.7.1:260ec2c36a
Type "help", "copyright", "cr
>>> from turtle import *
>>> forward(100)
>>> circle(100)
>>> left(90)
>>> color('red')
>>>
```



⑥color('red')

矢印の色が赤く

①windows PowerShell
あるいは コマンドプロンプト
をクリック



```

PS C:\Users\ooo > python
Python 3.7.1 (v3.7.1:260ec2c36
Type "help", "copyright", "cre
>>> from turtle import *
>>> forward(100)
>>> circle(100)
>>> left(90)
>>> forward(40)
>>> right(90)
>>> color('blue')
>>> circle(60)
>>> left(90)
>>> color('red')
>>> forward(200)
>>>

```

File Edit Format Run Options Window Help

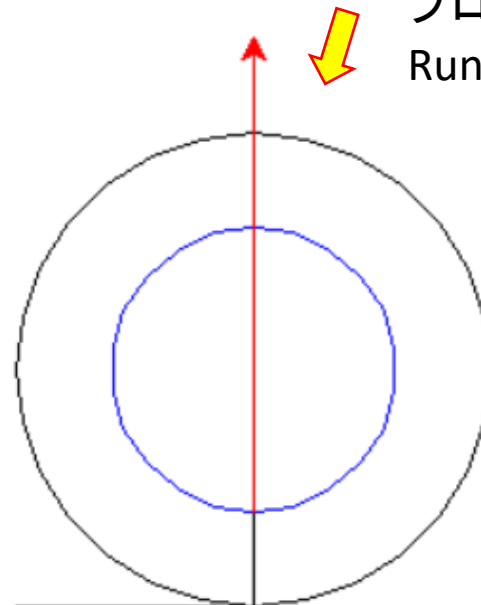
```

from turtle import *
forward(100)      # 100歩進め
circle(100)       # 半径100の円を描け
left(90)          # 90度左向け
forward(40)       # 40歩進め
right(90)         # 90度右向け
color('blue')     # 青ペンを持て
circle(60)        # 半径60の円を描け
left(90)          # 90度左向け
color('red')      # 赤ペンを持て
forward(200)      # 200歩進め

```

連続した動きを見たい場合は、IDLE(PYTHON)に上述のプログラムを書き入れて
Run Module またはF5

一つ毎に動きを確認した場合は、一行ずつリターンする



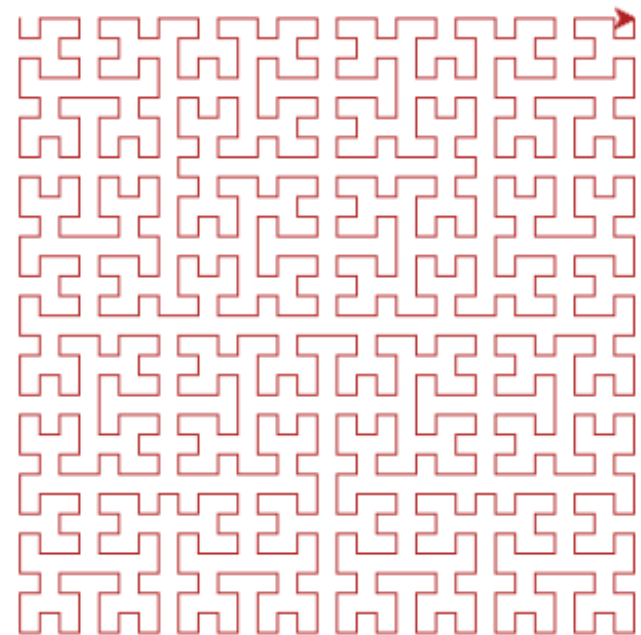
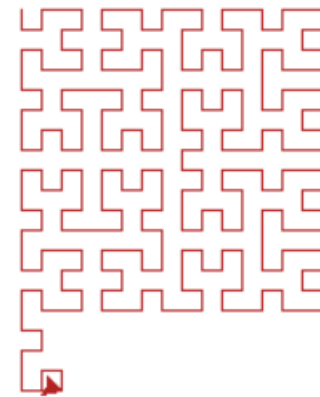
turtleでヒルベルト曲線を描く

```
from turtle import *

step = 10

def draw(depth, angle):
    if depth <= 0:
        return
    right(angle)
    draw(depth - 1, -angle)
    forward(step)
    left(angle)
    draw(depth - 1, angle)
    forward(step)
    draw(depth - 1, angle)
    left(angle)
    forward(step)
    draw(depth - 1, -angle)
    right(angle)

color('firebrick')
draw(5, 90)
input()
```



描き終わるのに4分30秒くらいかかりました