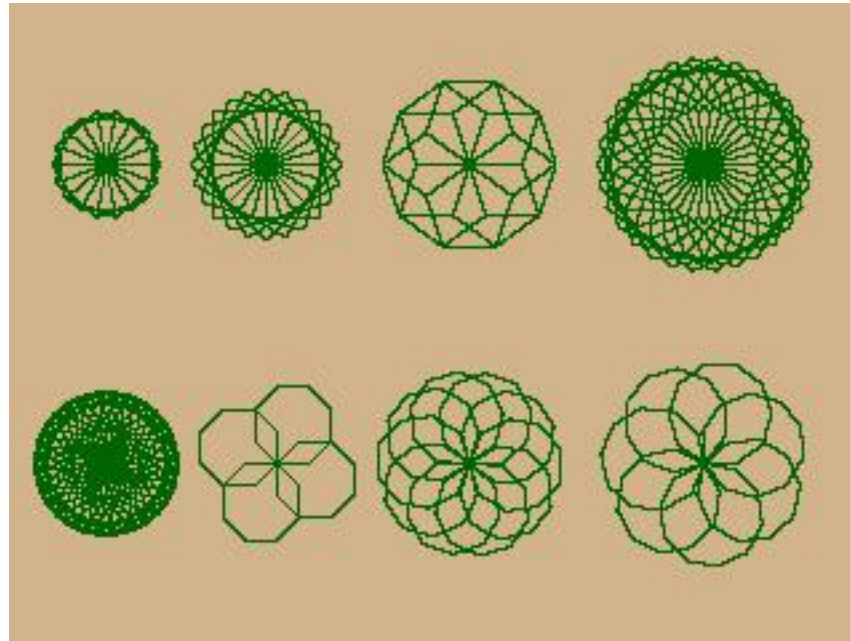# Turtle

December 2011

Example

Program

```
from PIL import Image
from math import cos,sin,pi
#
img=Image.new('RGB',(640,480),(210,180,140))
#
xt=320.0
yt=240.0
ht= 90.0
#
```

Functions (1)

```
def jump(xnew,ynew):
    global xt,yt
    xt=xnew
    yt=ynew
#
def turn(dh):
    global ht
    ht+=dh
```

Functions (2)

```
def move(r):
    global xt,yt
    #
    oldx,oldy=xt,yt
    #
    xt +=  r*cos(ht*pi/180.0)
    yt += -r*sin(ht*pi/180.0)
    #
    drawline(oldx,oldy,xt,yt)
```

Lab Assignment: Square, Poly, Spin Poly

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