

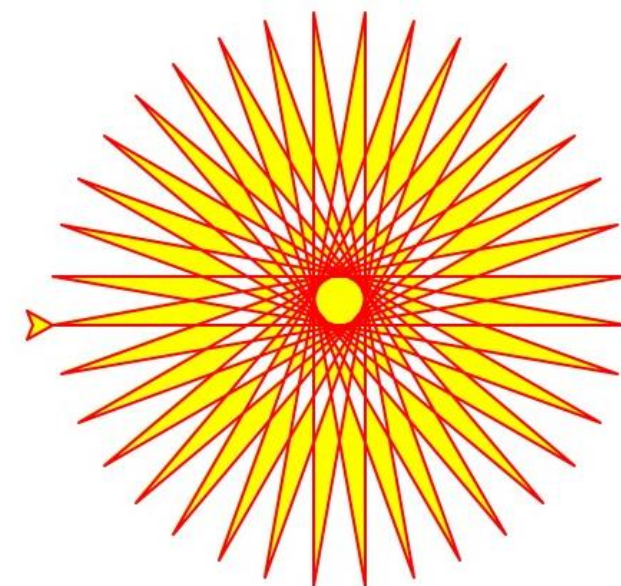


KS3

Computer Science Pen Command Codes

(Turtle Graphics – week 1-5)

Professor. A. Lawson



Turtle Movement Shapes (Square)



Task 1

STEP1 - `>>> import turtle` → 

STEP 2 - `>>> turtle.forward (100)`

STEP 3 - `>>> turtle.right (90)`

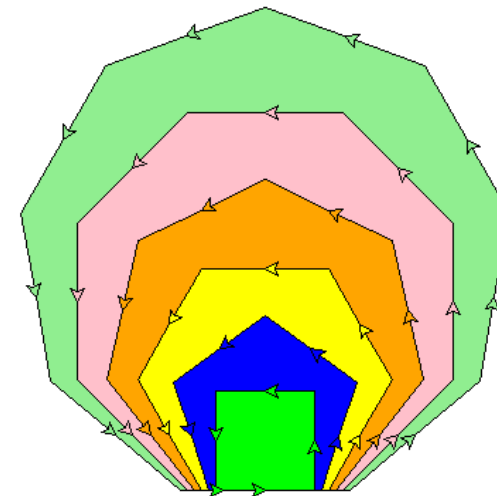
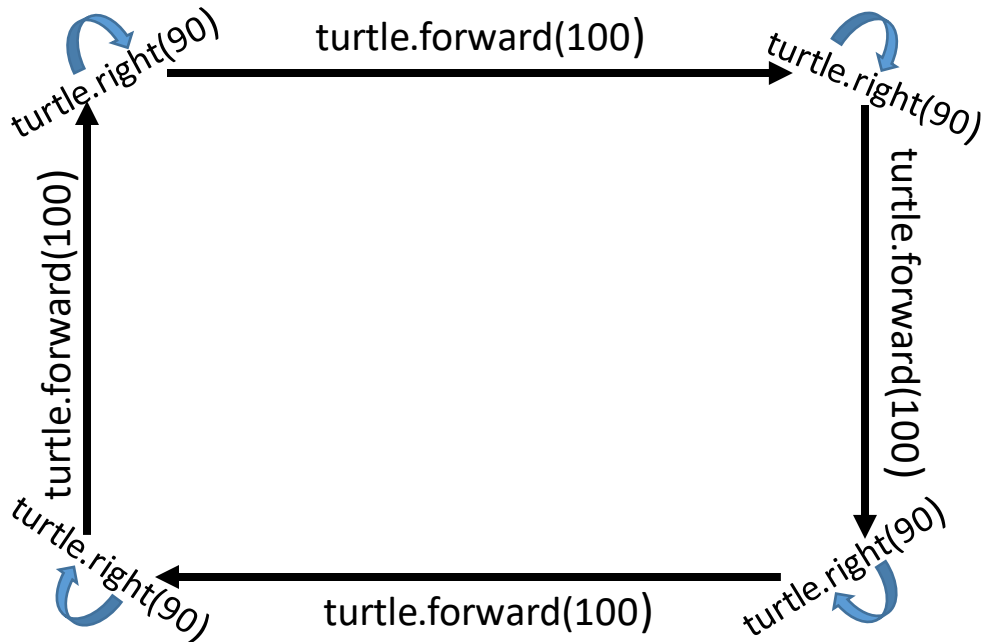
NEXT STEPS - `>>> repeat steps 2, 3`

STEP 1 (in this step you will bring in the turtle graphics movements.)

STEP 2 (in this step you are then telling the computer to move forward with a specific number of steps)

STEP 3 (in this step you are telling the computer to make a right turn to the angle degree specified)

As we should all know a SQUARE has 4 equal sides and all the angles are equal to 90 degrees.

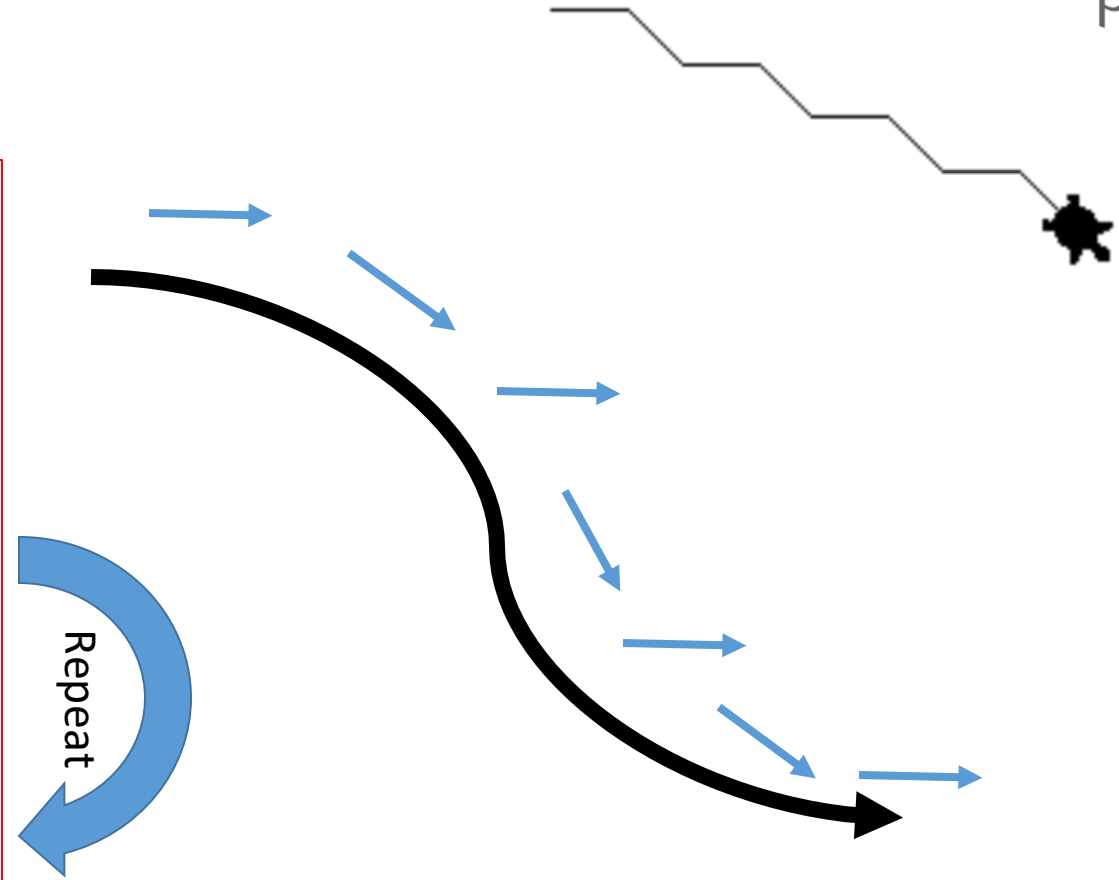


Angles & Lengths (Zig-Zag lines)



Task 2

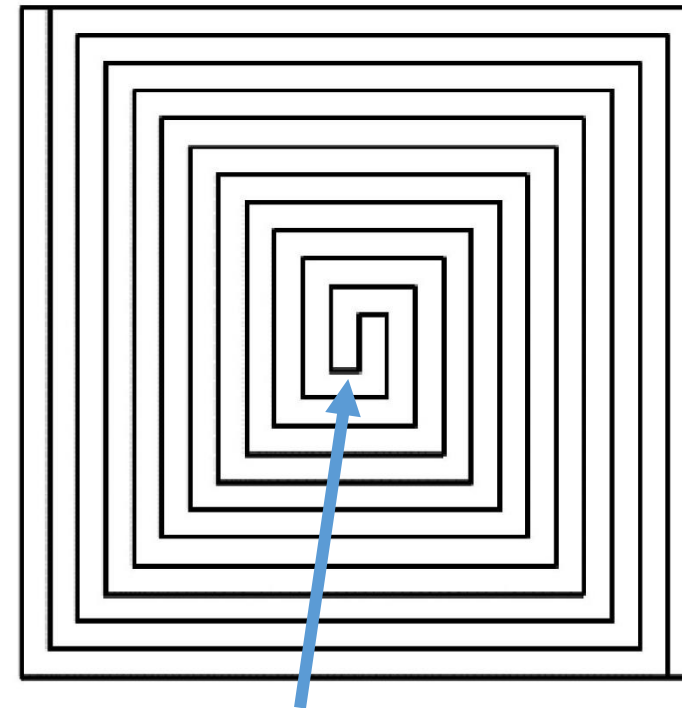
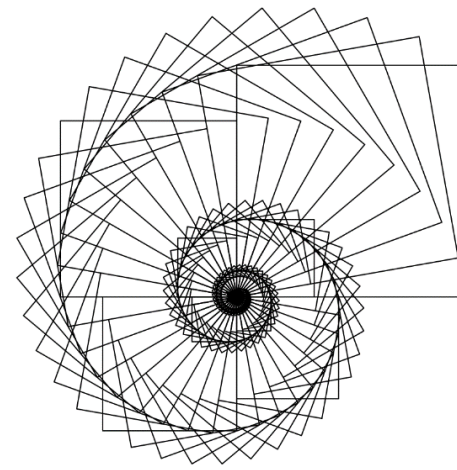
- Step 1 – import turtle
- – length = 20
- – angle = 45
- Step 2 – turtle.forward (length)
- Step 3 – turtle.right (angle)
- Step 4 – turtle.forward (length)
- Step 5 – turtle.left (angle)



Creating a Spiral (Square)

Task 3

- Step 1 – Import turtle
- – length = 10 (this is the length to be used)
- – angle = 90 (this is the angle to be used)
- Step 2 – turtle.forward (length)
- Step 3 – turtle.left (angle)
- – length + 10 (*you will 10 to every length to create distances between the squares*)



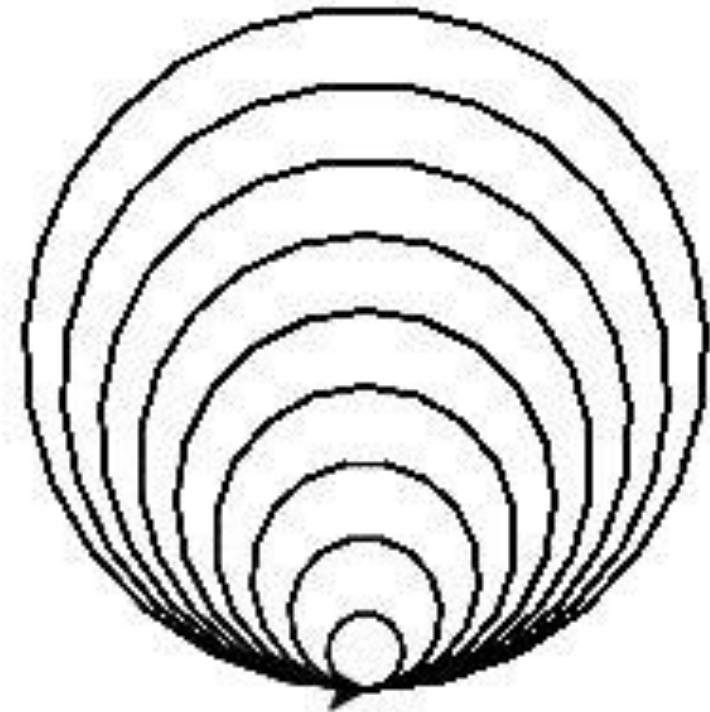
Starting point

Creating a Circle (multiples)

Task 4

- Step 1 – Import turtle
- Step 2 – up()
- Step 3 – goto(0, -50)
- Step 4 – down()
- Step 5 – circle (50)
- Step 6 – up()
- Step 7 – goto(0, -100)
- Step 8 – down()
- Step 9 – circle (100)
- Step 10 – up()
- Step 11 – goto(0, -150)
- Step 12 – down()
- Step 13 – circle (150)

We will repeat this steps until we have reached (300)



Starting point

Turtle movement (Spiral Star)

Task 5

Part - 1

- import turtle

Press ENTER 2
times

- Bob = turtle.Turtle()

Press ENTER 2
times

- for i in range(100):

- Bob.forward(200)

- Bob.left(135)

Press ENTER 2
times

- Turtle.done()

Part - 2

- import turtle

Press ENTER 2
times

- turtle.bgcolor("black")

- turtle.pensize(2)

- turtle.speed(0)

Press ENTER 2
times

- for i in range(6):

- for colours in ["red", "magenta", "cyan", "green", "yellow", "white"]:

- turtle.color(colours)

- turtle.circle(100)

- turtle.left(10)

Press ENTER 2
times

- turtle.hideturtle()

