

Turtle Graphics

Basic Commands Handout

Access the functions from the turtle module by putting this at the top of your file:

```
from turtle import *
```

Some basic turtle functions are listed below. Complete documentation for the turtle module is available at <https://docs.python.org/3/library/turtle.html>

`forward(distance)` – move forward by *distance* pixels

`back(distance)` – move backward by *distance* pixels

`right(angle)` – turn right *angle* degrees

`left(angle)` – turn left *angle* degrees

`goto(x, y)` – move to position *x*, *y*

`teleport(x, y)` – move to position *x*, *y* without drawing a line

`setheading(to_angle)` – rotate turtle to point in direction *to_angle*

`home()` – return turtle to starting position

`circle(radius)` – draw a circle

`pendown()` – cause the turtle to draw (default)

`penup()` – cause the turtle to not draw

`penize(width)` – set the width of the line drawn to *width* pixels

`pencolor(colorstring)` – set the drawing color using a string like "red", "yellow", or "#33cc8c"

`pencolor(r, g, b)` – set the drawing color using 3 floats from 0-1.0

`speed(speed)` – set the drawing speed; *speed* is 0..10. 1 is slowest; 10 is very fast; 0 is fastest.

`shape(name)` – change the shape of the turtle. *name* can be "arrow", "turtle", "circle", "square", "triangle", "classic"

`hideturtle()` – make the turtle invisible

`showturtle()` – make the turtle visible

`bgcolor(color)` – set the background color using colors like in `pencolor`

`clear()` – erase drawing area

`fill_color(color)` – set the color for filling a region

`begin_fill()` – begin drawing a filled region

`end_fill()` – end drawing a filled region

`tracer(0)`, `tracer(1)` – turn off and on animation (note: with animation off; with animation on, you will not see the result of drawing commands until animation is turned back on or the program ends.