Math Module

math.ceil(x)
Rounds a number up to the nearest integer

• math.cos(x) Returns the cosine of a number

math.degrees(x)
math.floor(x)
Converts an angle from radians to degrees
math.floor(x)
Rounds a number down to the nearest integer

• math.log(x) Returns the natural logarithm of a number, or the logarithm of

number to base.

• math.pow(a, b) Returns the value of a to the power of b

math.radians(x)
math.sin(x)
math.tan(x)
Converts a degree into radians
Returns the sine of a number
Returns the tangent of a number

Math Constants

math.e

math.inf

math.pi

Random Module

seed()

random.randint(a, b)

random.random()

String Methods

word.capitalize()
Converts the first character of word into upper case

word.lower()
Converts the string word into lower case
word.upper()
Converts the string word into upper case

• word.strip() Removes the white space before and after the word

Turtle Methods

bob = turtle.Turtle()
Creates a turtle instance and stores it in variable bob

bob.forward(distance)
Moves the turtle forward by distance

• bob.right(angle) Turn turtle right by angle units

bob.left(angle)
Turn turtle left by angle

bob.setheading(angle)
Set the orientation of the turtle to angle

heading 0 => turtle points right

o heading 90 => turtle points up

heading 180 => turtle points left

heading 270 => turtle points down

bob.home()
Move the turtle or the origin – the coordinates (0, 0)

bob.circle(radius)
Draw a circle with the given radius

• bob.distance(x, y) Returns the distance from the turtle to the point (x, y)

bob.penup()
Put the pen up, there won't be anything drawn when we move the turtle
bob.pendown()
bob.pencolor(color)
turtle.exitonclick()
bob.goto(x, y)
Put the pen down, drawing resumes
sets the pen color to the string color
Shut down the turtlegraphics window on mouse click
Move the turtle to the coordinates (x, y)