'''

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CS 110 - B57

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assignment4Ex3

'''

#Using a setUpTurtle function is the same as the first two programs.\

#The fact that the program outputs a graph is also the same.

#I can reuse the body of the drawSinCurve function and modify it to \

#accomodate to the logarithmic function.I can also use the setUpWindow \

#function and the main function accomodated to fit the logarithmic curve.

#My final y value is 11 because the log2(2048) = 11.

import math

import turtle

MAX\_X = 2048

MAX\_Y = 12

CONSTANT\_0 = 0

CONSTANT\_2 = 2

CONSTANT\_1 = 1

def setUpWindow(screenObject):

screenObject.setworldcoordinates(CONSTANT\_0,-CONSTANT\_1,MAX\_X,MAX\_Y)

screenObject.bgcolor('lightblue')

def setUpTurtle(turtle):

turtle.goto(CONSTANT\_0,CONSTANT\_0)

turtle.goto(MAX\_X,CONSTANT\_0)

turtle.penup()

turtle.goto(CONSTANT\_0,CONSTANT\_2)

turtle.pendown()

turtle.goto(CONSTANT\_0,-CONSTANT\_2)

turtle.goto(CONSTANT\_0,CONSTANT\_0)

def drawLogCurve(turtleObject):

for angle in range(CONSTANT\_1,(MAX\_X+CONSTANT\_1)):

x = angle

y = math.log(angle,CONSTANT\_2)

turtleObject.goto(x,y)

def log(xValue):

return math.log(xValue,CONSTANT\_2)

def main():

sn = turtle.Screen()

fred = turtle.Turtle()

setUpWindow(sn)

setUpTurtle(fred)

drawLogCurve(fred)

main()

