代码

```
import turtle
import math
pi = 3.14

##Initialize
turtle.setworldcoordinates(-2*pi-1,-5,2*pi+1,5)
t = turtle.Turtle()
t1 = turtle.Turtle()
t2 = turtle.Turtle()
t3 = turtle.Turtle()
t.pensize(3)
t1.pensize(3)
t2.pensize(3)
t3.pensize(3)
t.pencolor('black')
t1.pencolor('green')
t2.pencolor('red')
t3.pencolor('blue')

##Draw Axis
t.penup()
t.goto(-2*pi,0)
t.pendown()
t.goto(2*pi,0)
t.goto(0,0)
t.goto(0,4)
t.goto(0,-4)

##Draw functions
t1.pu(),t2.pu(),t3.pu()
xn = -2*pi
t1.goto(xn,math.sin(xn))
t1.write("y=math.sin(x)",font=("consolas",15,"normal"))
t2.goto(xn,math.cos(xn))
t2.write("y=math.cos(x)",font=("consolas",15,"normal"))
t3.goto(xn,2*math.cos(2*xn))
t3.write("y=math.2cos(2x)",font=("consolas",15,"normal"))
t1.pd(),t2.pd(),t3.pd()
for x1 in range(int(-2*pi*100),int(2*pi*100),10):
    x = x1/100
    t1.goto(x,math.sin(x))
    t2.goto(x,math.cos(x))
    t3.goto(x,2*math.cos(2*x))

t.hideturtle()
t1.hideturtle()
t2.hideturtle()
t3.hideturtle()
turtle.done()
```

运行结果