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Lab 9

Seat 29

'''

A class of functions to handle and compute rectangles

'''

class rectangle:

def \_\_init\_\_(self,height = 1,width = 2):

self.height = height

self.width = width

def getWidth(self):

return self.width

def getPerimeter(self):

return self.height \* 2 + self.width \* 2

def getArea(self):

return self.height \* self.width

def main():

#test method

x = rectangle(30,3)

y = rectangle(35.5,3.7)

print("Testing out the rectangle functions with two value for height and width\nTriangle 1: width=3 height=30\nTriangle 2: width=3.7 height=35.5")

print()

print("Width of rectangle 1 is",x.width)

print("Height of rectangle 1 is",x.height)

print("Area of rectangle 1 is",x.getArea())

print("Perimeter of rectangle 1 is",x.getPerimeter())

print()

print("Width of rectangle 2 is",y.width)

print("Height of rectangle 2 is",y.height)

print("Area of rectangle 2 is",y.getArea())

print("Perimeter of rectangle 2 is",y.getPerimeter())

print()

main()

-----------------------------END---------------------------------

import math

class regularPolygon:

#class which handlers and calculates n-sided polynomials

def \_\_init\_\_(self,n=3,side=1,x=0,y=0):

self.n=int(n)

self.side=float(side)

self.x=float(x)

self.y=float(y)

def getPerimeter(self):

return self.n \* self.side

def getArea(self):

answer = (self.n \* self.side\*\*2)/(4\*math.tan(math.pi/self.n))

return answer

def main():

#test class

one = regularPolygon()

print('Number of sides:',one.n)

print('Length of the sides:',one.side)

print('Value of x is:',one.x)

print('Value of y is:',one.y)

print()

print('Perimeter for polygon 1:',one.getPerimeter())

print('Area for polygon 1:',round(one.getArea(),2))

print('---------------------------------------------')

two = regularPolygon(6,4)

print('Number of sides:',two.n)

print('Length of the sides:',two.side)

print('Value of x is:',two.x)

print('Value of y is:',two.y)

print()

print('Perimeter for polygon 2:',two.getPerimeter())

print('Area for polygon 2:',round(two.getArea(),2))

print('---------------------------------------------')

print()

three = regularPolygon(10,4,5.6,7.8)

print('Number of sides:',three.n)

print('Length of the sides:',three.side)

print('Value of x is:',three.x)

print('Value of y is:',three.y)

print()

print('Perimeter for polygon 2:',three.getPerimeter())

print('Area for polygon 2:',round(three.getArea(),2))

print('---------------------------------------------')

main()