

QUIZ 7

COMP9021 PRINCIPLES OF PROGRAMMING

```
$ python3
...
>>> from quiz_7 import *
>>> disk_1 = Disk()
>>> disk_1
Disk(Point(0.00, 0.00), 0.00)
>>> disk_1.area
0.0
>>> disk_2 = Disk(Point(3, 0), 4)
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: __init__() takes 1 positional argument but 3 were given
>>> disk_2 = Disk(centre = Point(3, 0), radius = 4)
>>> disk_2.area
50.26548245743669
>>> disk_1.intersects(disk_2)
True
>>> disk_2.intersects(disk_1)
True
>>> disk_3 = disk_1.absorb(disk_2)
>>> disk_3
Disk(Point(3.00, 0.00), 4.00)
>>> disk_1.change_radius(2)
>>> disk_1.area
12.566370614359172
>>> disk_3 = disk_1.absorb(disk_2)
>>> disk_1
Disk(Point(0.00, 0.00), 2.00)
>>> disk_2
Disk(Point(3.00, 0.00), 4.00)
>>> disk_3
Disk(Point(2.50, 0.00), 4.50)
>>> disk_4 = Disk(centre = Point(-4, 0), radius = 2)
>>> disk_4.intersects(disk_1)
True
```

```
>>> disk_5 = disk_4.absorb(disk_1)
>>> disk_5
Disk(Point(-2.00, 0.00), 4.00)
>>> disk_5.change_radius(5)
>>> disk_5
Disk(Point(-2.00, 0.00), 5.00)
>>> disk_6 = Disk(centre = Point(1, 2), radius = 6)
>>> disk_7 = disk_5.absorb(disk_6)
>>> disk_7
Disk(Point(-0.08, 1.28), 7.30)
>>> disk_7.area
167.54280759052247
>>> disk_8 = Disk()
>>> disk_8
Disk(Point(0.00, 0.00), 0.00)
>>> disk_8.change_radius(7)
>>> disk_8.absorb(disk_7)
Disk(Point(-0.05, 0.79), 7.79)
```