

Self-test: Classes and Objects

Create a class `ball`, that consists of the x-coordinate and the y-coordinate of the center and a radius. The components are to be called `xc`, `yc`, and `ra`.

Create a function `__str__` that returns a string describing the ball. For example, if `xc=2`, `yc=3` and `ra = 1`, it should return

```
((2,3), 1).
```

Create a similar function `__repr__` that returns a string describing the ball in a bit more detail. In the same case as above, it should print out

```
Ball object with center (2,3) and radius 1.
```

Create an instance method that returns the area of the ball.

Your program should pass the following test:

```
b1 = Ball(1, 2, 3)          ((1,2), 3)
b2 = Ball(2, 3, 2)          ((2,3), 2)
print(b1)                   Ball object with center (1, 2) and radius 3
print(b2)                   Ball object with center (2, 3) and radius 2
print(repr(b1))              28.274333882308138
print(repr(b2))              12.566370614359172
print(b1.area())             1
print(b2.area())
```

Solutions:

See the file `selftestsolutions.py`.