

Object Oriented Programming

Homework Assignment

Problem 1

Fill in the Line class methods to accept coordinates as a pair of tuples and return the slope and distance of the line.

```
In [1]: class Line:

        def __init__(self, coor1, coor2):
            pass

        def distance(self):
            pass

        def slope(self):
            pass
```

```
In [2]: # EXAMPLE OUTPUT

coordinate1 = (3,2)
coordinate2 = (8,10)

li = Line(coordinate1,coordinate2)
```

```
In [3]: li.distance()
```

```
Out[3]: 9.433981132056603
```

```
In [4]: li.slope()
```

```
Out[4]: 1.6
```

Problem 2

Fill in the class

```
In [5]: class Cylinder:

        def __init__(self,height=1,radius=1):
            pass

        def volume(self):
            pass

        def surface_area(self):
            pass
```

```
In [6]: # EXAMPLE OUTPUT
        c = Cylinder(2,3)
```

```
In [7]: c.volume()
```

Out[7]: 56.52

```
In [8]: c.surface_area()
```

Out[8]: 94.2