5) What does the following code print? (20 points)

```python
class Shape(object):
    def __lt__(s1, s2):
        return s1.area() < s2.area()
    def __str__(self):
        try:
            return 'Shape with area ' + str(self.area())
        except:
            return 'Shape'

class Rectangle(Shape):
    def __init__(self, h, w):
        self.height = h
        self.width = w
    def __lt__(r1, r2):
        return r1.height < r2.height

class Square(Rectangle):
    def __init__(self, s):
        Rectangle.__init__(self, s, s)
    def __str__(self):
        return 'Square with side ' + str(self.height)

class Circle(Shape):
    def __init__(self, radius):
        self.radius = radius
    def area(self):
        return 3*(self.radius**2)

def reorder(L):
    for e in L:
        if L[0] < e: L[0] = e

s = Square(5)
s1 = s
s = Square(4)
r = Rectangle(3, 4)
c = Circle(0.5)
L = [s, s1, r, c]
try:
    reorder(L)
except:
    print 'here'
for e in L: print e
```

Output:
```
here
Square with side 5
Square with side 5
Shape
Shape with area 0.75
```