# SelfAssessment83

October 25, 2015

## 1 Exercise 8.3

Change the code (Example 8.6 or Example 8.7) to return the bounding box with a tuple or nested tuple.

*Answer appears after one blank page (so you don't peek).*

Are you sure you're ready to peek?

## 2 Possible Solutions

```
In [1]: def boundingBox(pts):
            '''Find bounding box for sequence of points   pts[0], pts[1]...
               For each member p of pts, the x- and y-coordinates
               are p[0] and p[1] respectively'''
            xmin = ymin =  1.e300
            xmax = ymax = -1.e300
            for p in pts:
                xmin = min(xmin,p[0])
                ymin = min(ymin,p[1])
                xmax = max(xmax,p[0])
                ymax = max(ymax,p[1])

            #return corners as tuple of tuples (2 tuples, not 4 values!!)
            return ((xmin,ymin),(xmax,ymax))

        #list of 3 points
        wellLocations = [ [-5,5], [10,-15], [12,3] ]

        print "     points:",wellLocations
        print "bounding box:",boundingBox(wellLocations),'\n'

        ll,ur = boundingBox(wellLocations)

        print 'lower left  corner:', ll
        print 'upper right corner:', ur

points: [[-5, 5], [10, -15], [12, 3]]
bounding box: ((-5, -15), (12, 5))

lower left  corner: (-5, -15)
upper right corner: (12, 5)
```