## Mathematics 1262 (C++ Programming) Hilary 2014

February 9, 2014

## 1 Assignment B04, due 14/2/14

There are two alternative assignments. If you choose this one, please submit it as **B04.cpp**, nothing else, not ass3.cpp nor b03.cpp nor b03.Cpp nor anything else.

Write a C++ program which reads at most 100 double-precision numbers from input, counts them, and stores them in an array.

Include a routine void statistics ( int n, double a[], ...) which calculates their lower quartile, median, upper quartile, and interquartile range. Note that the median of an even number of ranked quantities is the average of their middle two, etcetera.

Your program should print out, e.g.,

```
a.out < random
100 numbers read in, first quartile 584
median 615.5
third 652.5
interquartile range 68.5</pre>
```

Motivation. Experimenting with routines and argument passing styles. Scope for creativity.