

Practical IB Computer Science Mock Test Quarter 1—Statistics

This program will calculate the *minimum*, *maximum*, *range*, and *average* of a set of input numbers. Work through the test from the beginning. Your program should build and grow –do not start a new program for each point. During this test, you may use any resources that **you** have created, but do **not** use Internet, books, e-books, or notes not written by you. Hard copies of hand-written notes, translation dictionaries and simple reference materials (cheat sheets, pocket references/guides) are allowed. Your teacher will check that you meet these regulations. Failure to comply may result in you getting at most a 2.0 for the assessment.

<i>Instructions</i>	<i>Program Display</i>
1. <i>Output</i> your name on the screen.	(Your name)
2. <i>Input</i> an (integer) number.	How many numbers to process? 5
3. Output a warning message <i>if the number is less than 3</i> .	How many numbers to process? 1 Input Error.
4. Exit the program/do nothing if the input is invalid.	How many numbers to process? 2 Input Error. [End]
5. <i>Input</i> as many numbers as the number entered in instruction #2. Use the numbers in this example for testing. →	How many numbers to process? 5 Enter number: 7 Enter number: 5 Enter number: 2 Enter number: 9 Enter number: 3
6. Find the smallest number that was input (<i>minimum</i>) and output it.	Minimum: 2
7. Find the largest number that was input (<i>maximum</i>) and output it.	Maximum: 9
8. Calculate the <i>range</i> of the numbers that were input and output it.	Range : 7
9. Calculate the <i>average</i> of the numbers that were input and output it.	Average: 5.2
10. Check if the maximum was a prime or not, and output the result on the screen. →	How many numbers to process? 7 Enter number: 7 Enter number: 5 Enter number: 3 Enter number: 2 Enter number: 8 Enter number: 9 Enter number: 6 Minimum: 2 Maximum: 9 Range : 7 Average: 5.714285714285714 Is the maximum a prime? False [End]

Submit your Java source code (.java file) to the corresponding online homework entry when you are done / before the end of the period. Good luck!

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A couple of hints that you may want to use for this mock test:

In order to force a Java program to stop or exit, you can use `System.exit(0)`; [0 means no error, any other number implies an error]

Below is the flow chart we used earlier in quarter 1 to find out whether a number is prime or not:

A flowchart that checks if a number is prime:

