Problem Sheet 2

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Q. 1 Write a C++ programme which prints out the first 40 Fibonacci numbers and the quotient of two consecutive Fibonacci numbers. Note: use for loop, use 30 spaces for the numbers and the quotients. Also give 20 digits precision for the quotients.

   (a) Rewrite the Fibonacci number programme using a while-loop and the second using a do-while-loop so that they produce exactly the same output as the original programme.

   (b) Can you modify the programme so that it will try to print out the first 100 Fibonacci numbers? Your output will probably have negative numbers for large n, due to integer overflow.

Q. 2 Write a programme to find the integer square root of a given number. That is the largest integer whose square is less than or equal to the given number.

Q. 3 Write and run a program that reads an unspecified number of numbers and then prints them together with their mean and standard deviation.