

Math 201 - Program #5

April 15, 2011

Name _____

1. Write, compile, and test a C++ function template for a function that returns the mean of the elements of a 1-D array. Your function should be named `mean`, and it should have only two formal arguments: an array of decimal numbers and an integer indicating the size of the array. In your main program, test the template with an array of type `float`, an array of type `double`, and an array of type `long double`. In all three cases, use arrays of different sizes.
2. Write, compile, and test a C++ function that computes the product of two square matrices. The function header line should be similar to

```
void mtrx_prod( double A[rows][cols], double B[rows][cols],  
               double C[rows][cols], int n )
```

where A and B are $n \times n$ matrices and $C = AB$ is an $n \times n$ matrix. In your main program, use the read and print functions available in the file `matrix.h`.