Quiz #7

Name:

1. Function **Average** returns the average of the numbers in matrix M. For instance, if M is a shown below, **Average** returns 3.5.

```
1.0 4.0 3.0
6.0 2.0 5.0
```

Complete function **Average** started below:

```cpp
// Pre: M has more than zero rows and more than zero columns
// Post: The average of the values in M is returned.
double Average( const apmatrix<double> & M )
{
```

2. Write a **main** that opens a file named "input.txt", and then prints the average of the **double** values contained in a matrix represented in the file. You may assume that the file exists, and thus you do not have to check the state of the stream; you also may use the simplest form for open (in other words, you do not need the second parameter). The first two entries in the file are integers that tells you how many rows and columns are in a matrix. The subsequent numbers are the matrix entries. Those numbers are to be read into an apmatrix, and then the average is to be computed by calling the function in part 1.

```cpp
int main( )
{
    ifstream fin;
    apmatrix<double> M;
    int NumberOfRows, NumberOfCols;
    int r, c;
```