Write a C++ program to compute the sides of a Square according to a decrease ratio. Define an abstract Shape class:

- Protected variables side1 (type: double), side2 (type: double).
- Define a constructor for initializing all variables.
- Define a pure virtual function called calculate.

Define a Square class which is inherited from Shape class:

- Private variable ratio (type: double).
- Define a constructor for initializing all variables.
- Define a virtual function called calculate which checks whether sides are larger than the ratio. If the sides are large enough to decrease in the given ratio, decrease the sides. Otherwise throw an exception such as "It is not possible to decrease for that ratio!!" as can be seen from the sample run.
- friend output operator << overloading function to output the information in a Square object as given in the sample run.

In main:

- Ask user for the sides.
- Ask user for the decrease ratio.
- Define a Square object s1 with these values.
- Call calculate function for Square object, if there is an exception you should catch it here otherwise program should output the information of Square object.

Sample Run 1

```
Enter the sides: 3        4
Enter the decrease ratio: 2
New sides are: 2.98       3.98
```

Sample Run 2

```
Enter the sides: 13       14
Enter the decrease ratio: 20
It is not possible to decrease for that ratio!!
```