Assuming there are no deposits other than the original investment, the balance in a savings account after one year may be calculated

Principal is the balance in the savings account, Rate is the interest rate, and T is the number of times the interest is compounded during a year (T is 4 if the interest is compounded quarterly).

Write a program char asks for the principal, the interest rate, and the number of times the interest is compounded. It should display a report similar to:

Main.cpp

```
#include "interest.h"


int main()
{
   Interest i;


   i.findInterest();


   return 0;
}
```

Interest.h

```
#include <iostream>


class Interest
{
private:
   double principal;
   double interestRate;
   int numberOfTimes;


public:
   void findInterest();
```

```
};
```

Interest.cpp

```
#include "interest.h"
#include <iostream>
#include <iomanip>
#include <cmath>
using namespace std;

void Interest::findInterest()
{
   double totalAmount;
   cout << "\tCalculate Interest Earned" << endl;
   cout << "Please input the principal: ";
   cin >> principal;
   cout << "Please input the interest rate: ";
   cin >> interestRate;
   cout << "Please input the number of times the interest
compounds: ";
   cin >> numberOfTimes;

   totalAmount = principal * pow((1 +
((interestRate/100)/numberOfTimes)), numberOfTimes);

   cout << fixed << showpoint <<setprecision(2)
   << "Interest rate: \t\t" << interestRate <<"%"<< endl
   << "Times compounded: \t" << numberOfTimes << endl
   << "Principal: \t\t$" << principal << endl
   <<"Interest: \t\t$" << totalAmount - principal << endl
   <<"Amount in savings: \t$" << totalAmount << endl;
```

```
};
```

```
          Calculate Interest Earned
  Please input the principal: 1000
  Please input the interest rate: 4.25
  Please input the number of times the interest compounds: 12
  Interest rate:          4.25%
  Times compounded:       12
  Principal:              $1000.00
  Interest:               $43.34
  Amount in savings:      $1043.34
```