```cpp
//filename: lab03.cpp
//Programmer: Duncan McFarlane
//Date: 1/28/2020
//Compiler Used: VS 2017
//Purposes,
//   Program 1: Desmonstrate the ability to use time(),
//              static_cast, and increment operators.
//   Program 2: Calculate accumulated interest from
//              initial investment, rate and years.


#include <iostream>
#include <ctime>
using namespace std;

#define prog 1
#if prog == 1
int main() {

	int intval0 = 0;
	int intval1 = 0;
	double quotient = 0.0;
	int incrementedVal;

	cout << "Number of seconds since UNIX Epoch: " << time(0) << endl;

	cout << "Enter 11 and 2 which will be saved in two integer variables:";
	cin >> intval0 >> intval1;
	quotient = static_cast<double> (intval0)/intval1;
	cout << "The Quotient = " << quotient << endl;

	cout << "Enter an integer: ";
	cin >> incrementedVal;
	cout << "The pre-incremented value = " << ++incrementedVal;


	return 0;
}
```

```
Number of seconds since UNIX Epoch: 1580257056
Enter 11 and 2 which will be saved in two integer variables:11 2
The Quotient = 5.5
Enter an integer: 1111
The pre-incremented value = 1112
```

```cpp
#elif prog == 2
#include <cmath>
int main() {

	double invst = 0.0;
	double intrstRate = 0.0;
	double numYears = 0.0;
	double accumVal = 0.0;

	cout << "Enter investment amount: ";
```

```
        cin >> invst;
        cout << "Enter annual interest rate in percentage: ";
        cin >> intrstRate;
        // Convert to a monthly percentage
        intrstRate /= 12;
        intrstRate /= 100;
        cout <<"Enter number of years: ";
        cin >> numYears;

        // This is the equation for annual interest rate
        accumVal = invst * pow(1.0 + intrstRate, numYears * 12.0);

        cout << "Accumulated value is $" << accumVal;

        return 0;
}
#endif
```

```
Enter investment amount: 1000.56
Enter annual interest rate in percentage: 4.25
Enter number of years: 1
Accumulated value is $1043.92
```