

Homework

```
#include<iostream>
using namespace std;
class complex{
public:
double real_part;
double imaginary_part;
complex(double a,double b){
    real_part=a;
    imaginary_part=b;
}
double extract_real_part(){
    return real_part;
}
double extract_imaginary_part(){
    return imaginary_part;
}
friend complex add(complex c1,complex c2,complex c3){
    c3.real_part = c1.real_part + c2.real_part;
    c3.imaginary_part = c1.imaginary_part + c2.imaginary_part;
    return c3;
}
friend complex minus(complex c1,complex c2,complex c3){
    c3.real_part = c1.real_part - c2.real_part;
    c3.imaginary_part = c1.imaginary_part - c2.imaginary_part;
    return c3;
}
friend complex multiple(complex c1,complex c2,complex c3){
    c3.real_part = c1.real_part * c2.real_part - c1.imaginary_part * c2.imaginary_part;
    c3.imaginary_part = c1.real_part * c2.imaginary_part + c1.imaginary_part * c2.real_part;
    return c3;
}
friend complex divide(complex c1,complex c2,complex c3){
    c3.real_part = (c1.real_part * c2.real_part + c1.imaginary_part * c2.imaginary_part) /
(c2.real_part * c2.real_part + c2.imaginary_part * c2.imaginary_part);
    c3.imaginary_part = (c1.imaginary_part * c2.real_part - c1.real_part * c2.imaginary_part) /
(c2.real_part * c2.real_part + c2.imaginary_part * c2.imaginary_part);
    return c3;
}
};
```