

# Object-Oriented Programming I

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## Question 5: Final (2015/2016)

### Code:

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

class Fraction {
public:
    int numerator;
    int denominator;
    Fraction(int n=1, int d=1) {
        numerator = n;
        if (d == 0)
            denominator = d + 1;
        else if (d < 0)
            denominator = -d;
        else
            denominator = d;
    }
    ~Fraction() {};
    Fraction operator+(Fraction a) {
        Fraction b;
        b.numerator = numerator + a.numerator;
        b.denominator = denominator + a.denominator;
        return b;
    }
    Fraction operator-(Fraction a) {
        Fraction b;
        b.numerator = numerator - a.numerator;
        b.denominator = denominator - a.denominator;
        return b;
    }
    Fraction operator*(Fraction a) {
        Fraction b;
        b.numerator = numerator * a.numerator;
        b.denominator = denominator * a.denominator;
        return b;
    }
};

void main() {
    Fraction i, j(3, 6), k(1,-5);
    i = j + k;
    cout << i.numerator << ' ' << i.denominator << endl;
}
```