

```
//This is a driver for the Fraction class to test its functionality
//Caspian Peavyhouse
//CS101-02
//11/19/2014
```

```
public class FractionDriver
{
    public static void main(String [] args)
    {
        //This is to test the constructors
        System.out.println("The output of (5 / 6) should be 5 / 6:");
        Fraction alpha = new Fraction(5, 6);
        System.out.println(alpha.toString());
        //Testing the reducing code
        System.out.println("The output of (7 / 49) should be 1 / 7:");
        Fraction beta = new Fraction(7, 49);
        System.out.println(beta.toString());
        //Testing the undefined code
        System.out.println("The output of (6 / 0) should be Undefined:");
        Fraction gamma = new Fraction(6, 0);
        System.out.println(gamma.toString());
        //Testing the negative code
        Fraction delta = new Fraction(-5, 3);
        Fraction zeta = new Fraction(4, -2);
        Fraction eta = new Fraction(-6, -19);
        System.out.println("The output of (-5 / 3) should be -5 / 3:");
        System.out.println(delta.toString());
        System.out.println("The output of (4 / -2) should be -2 / 1:");
        System.out.println(zeta.toString());
        System.out.println("The output of (-6 / -19) should be 6 / 19:");
        System.out.println(eta.toString() + "\n");

        Fraction answer = new Fraction();
        Fraction base = new Fraction(1, 5);

        //Test the add method
        Fraction addThis = new Fraction(7, 8);
        answer = base.add(addThis);
        System.out.println("(1 / 5) + (7 / 8) = ");
        System.out.println(answer.toString());

        //Test the subtract method
        Fraction subtractThis = new Fraction(7, 3);
        answer = base.subtract(subtractThis);
        System.out.println("(1 / 5) - (7 / 3) = ");
        System.out.println(answer.toString());

        //Test the multiply method
        Fraction multiplyThis = new Fraction(3, 2);
        answer = base.multiply(multiplyThis);
        System.out.println("(1 / 5) * (3 / 2) = ");
        System.out.println(answer.toString());

        //Test the divide method
        Fraction divideThis = new Fraction(5, 3);
        answer = base.divide(divideThis);
        System.out.println("(1 / 5) / (5 / 3) = ");
        System.out.println(answer.toString());

        //Test the reciprocal method
        Fraction flipThisOne = new Fraction(24, 17);
        System.out.println("The reciprocal of (24 / 17) is:");
        Fraction reciprocal = flipThisOne.reciprocal();
        System.out.println(reciprocal.toString());

        //Test greatestCommonDivisor
        System.out.println("\nThe greatest common divisor between 12 and 496 is: ");
    }
}
```

```
int aDivisor = Fraction.greatestCommonDivisor(12, 496);
System.out.println(aDivisor);

//Test accessor methods
System.out.println("\nThe numerator of 1 / 5 is: ");
System.out.println(base.getNumerator());

System.out.println("\nThe denominator of 1 / 5 is: ");
System.out.println(base.getDenominator());

} //main
} //FractionDriver
```