

Polynomial Tester

Use the tester class supplied at the bottom – you should get the following console printout

```
Poly1
+ 3 * x^4 + 1 * x^3-2
Poly2
+ 1 * x^5 + 3 * x^3 + 1 * x^2 + 2 * x + 2

Poly3
-3 * x^3 + 1 * x^2 + 1
Poly2+v
+ 1 * x^5 + 2 * x^2 + 2 * x + 3
Poly1+Poly3
+ 3 * x^4-2 * x^3 + 1 * x^2-1
Poly3*Poly3
+ 9 * x^6-6 * x^5 + 1 * x^4-6 * x^3 + 2 * x^2 + 1
Poly1*Poly2
+ 3 * x^9 + 1 * x^8 + 9 * x^7 + 6 * x^6 + 5 * x^5 + 8 * x^4-4 * x^3-2 *
x^2-4 * x-4
Poly2'
+ 5 * x^4 + 9 * x^2 + 2 * x + 2 + 0
Poly1'
+ 12 * x^3 + 3 * x^2 + 0
```

Tester:

```
public class PolynomialTester {

    public static void main(String[] args) {
        Polynomial Poly1 = new Polynomial();
        Polynomial Poly2 = new Polynomial();
        Polynomial Poly3 = new Polynomial();

        Poly1.addTerm(3, 4);
        Poly1.addTerm(-2, 0);
        Poly1.addTerm(1, 3);

        Poly2.addTerm(2, 0);
        Poly2.addTerm(1, 2);
```

```
Poly2.addTerm(3, 3);  
Poly2.addTerm(2, 1);  
Poly2.addTerm(1, 5);
```

```
Poly3.addTerm(-3, 3);  
Poly3.addTerm(1, 2);  
Poly3.addTerm(1, 0);
```

```
System.out.println("Poly1");  
System.out.println(Poly1);  
System.out.println("Poly2");  
System.out.println(Poly2);
```

```
System.out.println();  
System.out.println("Poly3");  
System.out.println(Poly3);
```

```
Polynomial r = new Polynomial();  
r = Poly2.add(Poly3);  
System.out.println("Poly2+v");  
System.out.println(r);  
Polynomial u = new Polynomial();  
u = Poly1.add(Poly3);  
System.out.println("Poly1+Poly3");  
System.out.println(u);  
System.out.println("Poly3*Poly3");  
Polynomial s = new Polynomial();  
s = Poly3.multiply(Poly3);  
System.out.println(s);
```

```
System.out.println("Poly1*Poly2");  
Polynomial v = new Polynomial();  
v = Poly1.multiply(Poly2);  
System.out.println(v);  
Polynomial t = new Polynomial();  
System.out.println("Poly2'");  
t = Poly2.derivative();  
System.out.println(t);  
Polynomial x = new Polynomial();  
System.out.println("Poly1'");  
x = Poly1.derivative();  
System.out.println(x);
```

```
}  
}
```

