

```

/*
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nbfs://nbhost/SystemFileSystem/Templates/Project/Maven2/JavaApp/src/main/java/${packagePath}/${mainClassName}.java to edit this template
 */
package com.mycompany.secante;

import java.util.Scanner;

/**
 *
 * @author salacomputocentro.ba
 */
public class Secante {

    public static void main(String[] args) {
        Scanner read = new Scanner(System.in);

        System.out.println("Digite grado");
        int grado = read.nextInt();

        double F[] = new double[grado + 1];

        System.out.println("Digite tolerancia");
        double tolerancia = read.nextDouble();

        System.out.println("Digite xo");
        double xo = read.nextInt();

        System.out.println("Digite xi");
        double xi = read.nextInt();

        for (int i = 0; i < F.length; i++) {
            System.out.println("Digite coeficiente #" + i);
            F[i] = read.nextDouble();
        }

        int sw = 0, it = 0;
        double fxi, fxd, x2 = 0, e;

        System.out.println("Digite numero maximo de iteracciones");
        int maxint = read.nextInt();

        while (sw == 0 && it <= maxint) {

            fxi = Evaluar(F, xo);
            fxd = Evaluar(F, xi);

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x2 = xi - (((xi - xo) * fxd) / (fxd - fxi));
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e = Math.abs(x2 - xi);
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System.out.println("iteraccion: " + it  
    + "Xo: " + xo  
    + "Xi: " + xi  
    + "f(xo): " + fxi  
    + "f(xi): " + fxd  
    + "x2: " + x2  
    + "E: " + e);
```

```
if (e <= tolerancia) {  
    sw = 1;
```

```
} else {
```

```
    xo = xi;  
    xi = x2;  
    it++;  
}
```

```
}
```

```
if (sw == 1) {  
    System.out.println("La raiz real: " + x2);  
} else {  
    System.out.println("Not found");  
}
```

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}
```

```
public static double Evaluar(double f[], double x) {  
    double fx = 0;  
    for (int i = 0; i < f.length; i++) {  
        fx += f[i] * Math.pow(x, i);  
    }  
    return fx;  
}
```

```
}
```