```
/*
 * Created by SharpDevelop.
 * User: Marc Jr. Landolt
 * Date: 05.08.2006
 * Time: 13::14
 *
 * To change this template use Tools | Options | Coding | Edit Standard Headers
.
 */

using System;


namespace VektorTester
{
    /// <summary>
    /// Beschriebung von Vektor.
    /// dies ist eine Klasse für Vektoralgebra,
    /// weitere informationen zu Vektoralgebra findet man in jeder Mathematik
 Formelsammlung
    /// </summary>
    public class Vektor
    {
        public bool debug=true;
        public double x=0;
        public double y=0;
        public double z=0;


        public Vektor(double x, double y, double z)
        {
            this.x=x;
            this.y=y;
            this.z=z;
            // this(); leider Java Befehl
            if (debug)
            {
                Console.WriteLine("Konstruktor");
                Console.WriteLine(Vektor.toString(this));
            }
        }
        public static Vektor Addition(Vektor a, Vektor b)
        {

            return new Vektor(a.x+b.x, a.y+b.y, a.z+b.z);
        }

        public static Vektor Subtraktion(Vektor a, Vektor b)
        {
            return new Vektor(a.x-b.x, a.y-b.y, a.z-b.z);
        }

        public static Vektor SkalarMultiplikation(double a, Vektor b)
        {
            return new Vektor(b.x*a, b.y*a, b.z*a);
        }

        public static Vektor SkalarMultiplikation(Vektor b, double a)
        {
            return new Vektor(b.x*a, b.y*a, b.z*a);
        }
```

```
        public static double Abs(Vektor a)
        {
            return Math.Sqrt(a.x*a.x+a.y*a.y+a.z*a.z);
        }

        public static double Skalarprodukt(Vektor a, Vektor b)
        {
            return a.x*b.x+a.y*b.y+a.z*b.z;
        }

        public static Vektor Vektorprodukt(Vektor a, Vektor b)
        {
            return new Vektor(a.y*b.z-a.z*b.y, a.z*b.x-a.x*b.z, a.x*b.y-a.y*
b.x);
        }

        public static double Spatprodukt(Vektor a, Vektor b, Vektor c)
        {
            return Skalarprodukt(a, Vektorprodukt(b,c));
        }

        public static string toString(Vektor a)
        {
            return "x="+a.x + " y=" + a.y + " z=" + a.z;
        }
    }
}
```