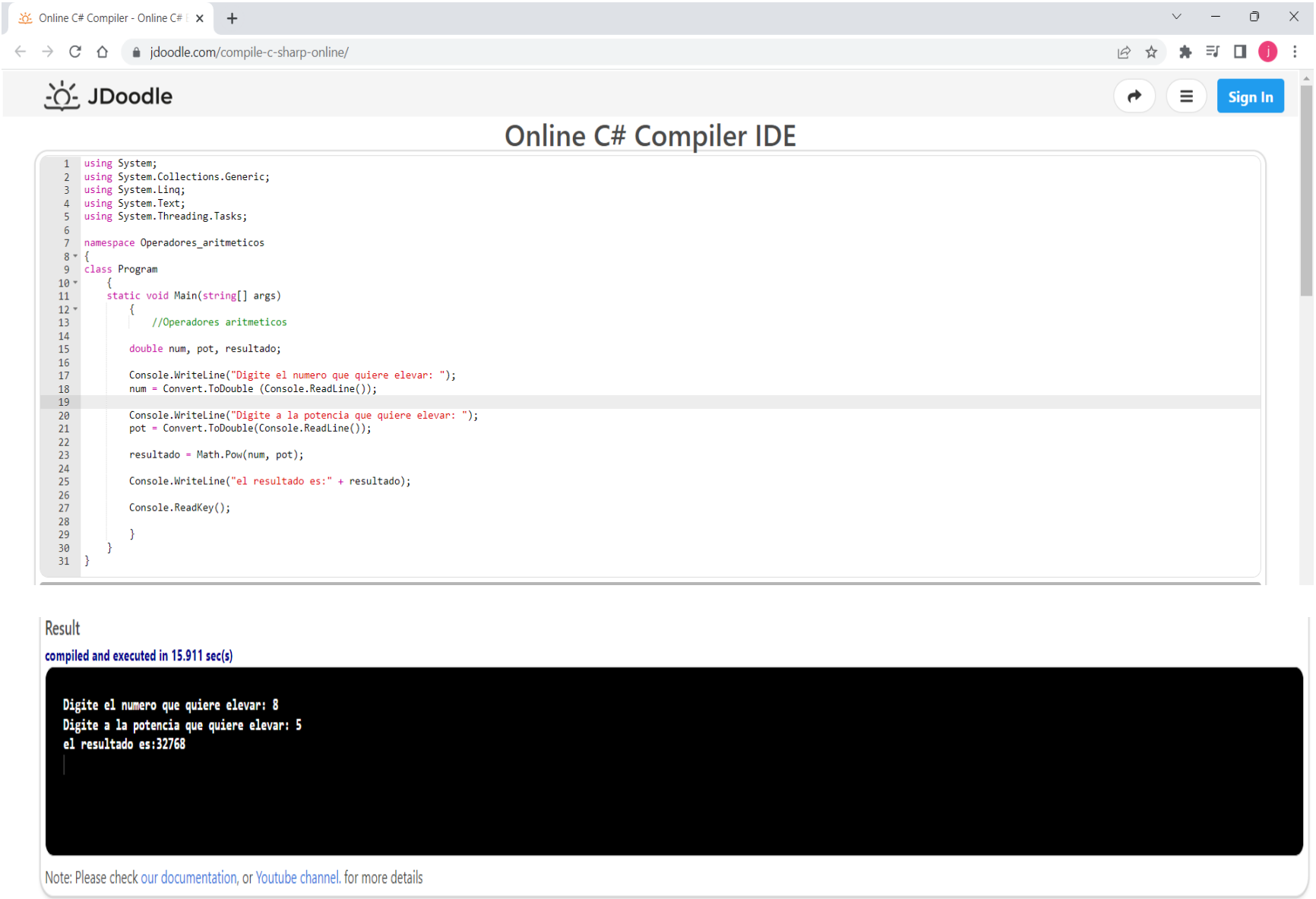
José Alejandro Palacios Padilla
Intro a la programación

22/9/2022
Carné:1129522

Hoja de Trabajo en Clase



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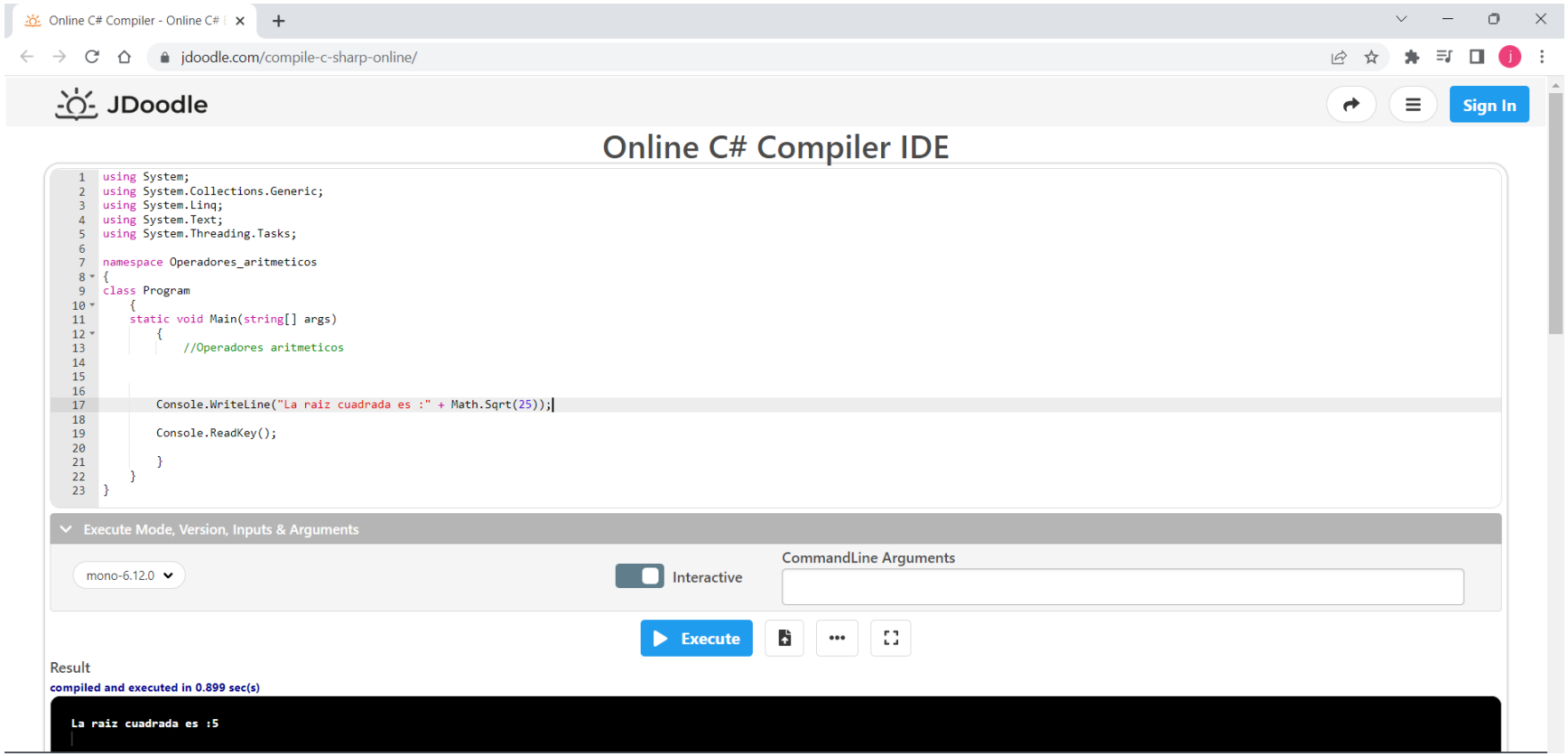

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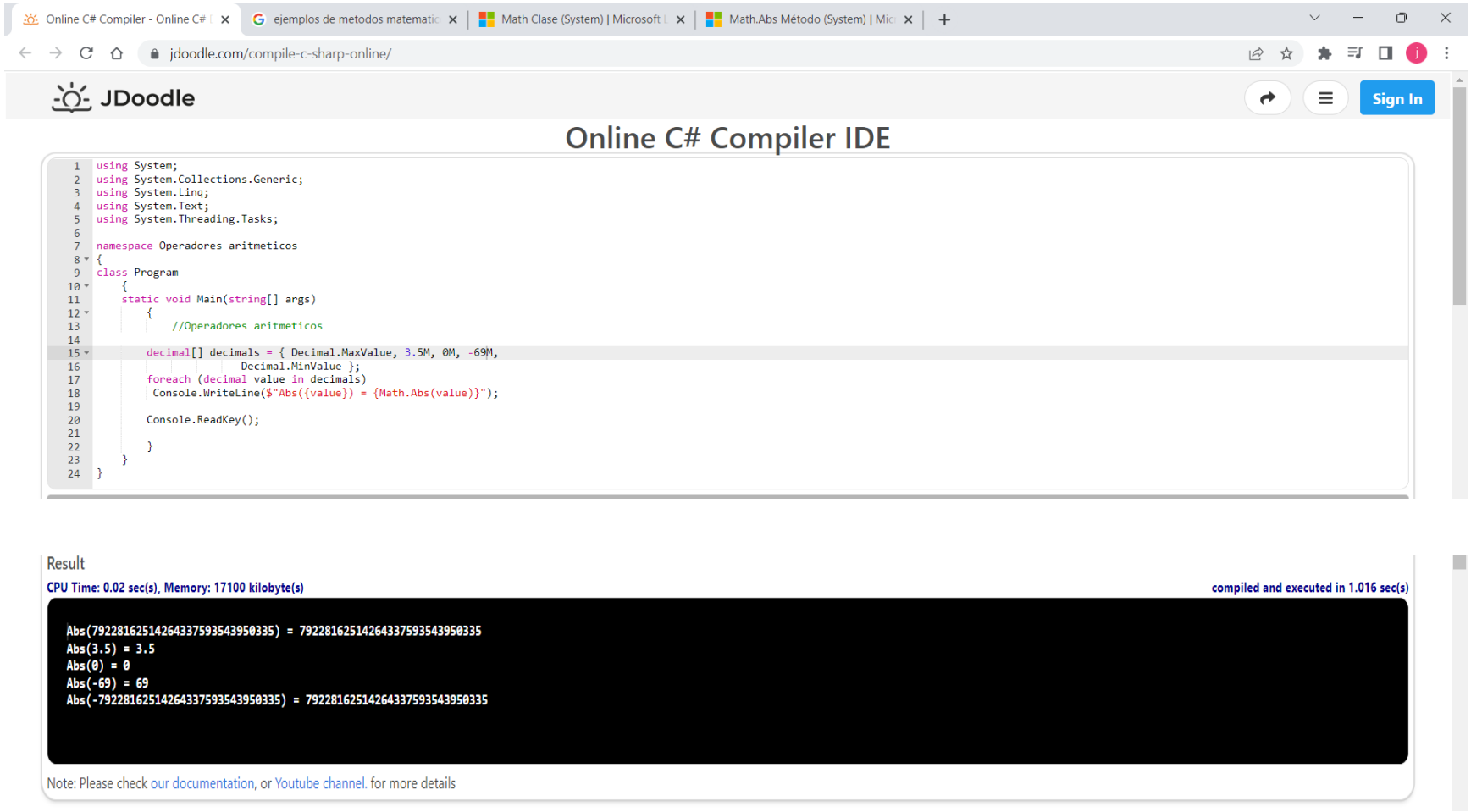
Ejemplos extras al video



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Online C# Compiler IDE

```
/// <summary>
/// The following class represents simple functionality of the trapezoid.
/// </summary>
using System;

namespace MathClassCS
{
    class MathTrapezoidSample
    {
        private double m_longBase;
        private double m_shortBase;
        private double m_leftLeg;
        private double m_rightLeg;

        public MathTrapezoidSample(double longbase, double shortbase, double leftLeg, double rightLeg)
        {
            m_longBase = Math.Abs(longbase);
            m_shortBase = Math.Abs(shortbase);
            m_leftLeg = Math.Abs(leftLeg);
            m_rightLeg = Math.Abs(rightLeg);
        }

        private double GetRightSmallBase()
        {
            return (Math.Pow(m_rightLeg,2.0) - Math.Pow(m_leftLeg,2.0) + Math.Pow(m_longBase,2.0) + Math.Pow(m_shortBase,2.0) - 2* m_shortBase * m_longBase)/ (2*(m_longBase - m_shortBase));
        }

        public double GetHeight()
        {
            double x = GetRightSmallBase();
            return Math.Sqrt(Math.Pow(m_rightLeg,2.0) - Math.Pow(x,2.0));
        }

        public double GetSquare()
        {
            return GetHeight() * m_longBase / 2.0;
        }

        public double GetLeftBaseRadianAngle()
        {
            double sinX = GetHeight()/m_leftLeg;
            return Math.Round(Math.Asin(sinX),2);
        }

        public double GetRightBaseRadianAngle()
        {
            double x = GetRightSmallBase();
            double cosX = (Math.Pow(m_rightLeg,2.0) + Math.Pow(x,2.0) - Math.Pow(GetHeight(),2.0))/(2*x*m_rightLeg);
            return Math.Round(Math.Acos(cosX),2);
        }

        public double GetLeftBaseDegreeAngle()
        {
            double x = GetLeftBaseRadianAngle() * 180/ Math.PI;
            return Math.Round(x,2);
        }

        public double GetRightBaseDegreeAngle()
        {
            double x = GetRightBaseRadianAngle() * 180/ Math.PI;
            return Math.Round(x,2);
        }

        static void Main(string[] args)
        {
            MathTrapezoidSample trpz = new MathTrapezoidSample(16.0, 9.0, 5.0, 7.0);
            Console.WriteLine("The trapezoid's bases are 20.0 and 10.0, the trapezoid's legs are 8.0 and 6.0");
            double h = trpz.GetHeight();
            Console.WriteLine("Trapezoid height is: " + h.ToString());
            double dxR = trpz.GetLeftBaseRadianAngle();
            Console.WriteLine("Trapezoid left base angle is: " + dxR.ToString() + " Radians");
            double dyR = trpz.GetRightBaseRadianAngle();
            Console.WriteLine("Trapezoid right base angle is: " + dyR.ToString() + " Radians");
            double dxD = trpz.GetLeftBaseDegreeAngle();
            Console.WriteLine("Trapezoid left base angle is: " + dxD.ToString() + " Degrees");
            double dyD = trpz.GetRightBaseDegreeAngle();
            Console.WriteLine("Trapezoid left base angle is: " + dyD.ToString() + " Degrees");
        }
    }
}
```

Result

CPU Time: 0.02 sec(s), Memory: 18380 kilobyte(s) compiled and executed in 1.07 sec(s)

```
The trapezoid's bases are 20.0 and 10.0, the trapezoid's legs are 8.0 and 6.0
Trapezoid height is: 4.67024886807929
Trapezoid left base angle is: 1.21 Radians
Trapezoid right base angle is: 0.73 Radians
Trapezoid left base angle is: 69.33 Degrees
Trapezoid left base angle is: 41.83 Degrees
```

Note: Please check our documentation, or Youtube channel. for more details

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Parte 2

Online C# Compiler IDE

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Operadores
{
class Program
    {
    static void Main(string[] args)
        {
            //Operadores relaciones

        double peso;

        Console.WriteLine("Digita tu peso: ");
        peso = Convert.ToDouble(Console.ReadLine());

        if(peso > 100){

            Console.WriteLine("tu peso es normal");
        }

        Console.ReadKey();

    }
}
}
```

Result

compiled and executed in 4.366 sec(s)

```
Digita tu peso: 150
tu peso es normal
```

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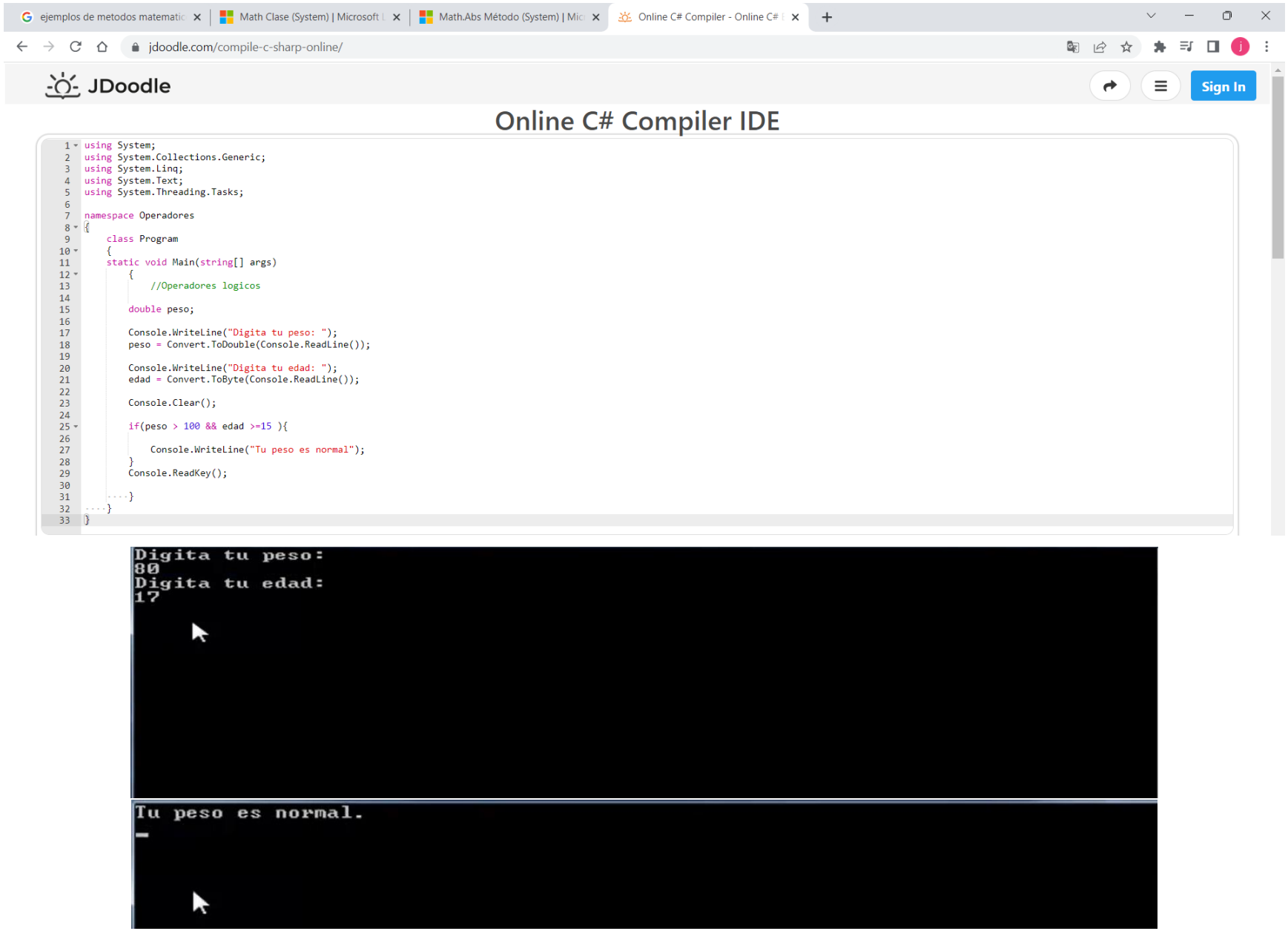

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Ejemplo de un programa