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ТСО-105Б-22

ЛР№5

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ЛР5.Информатика

{

class Program

{

int[] array = new int[100];

double[] array1 = new double[100];

static void Main(string[] args)

{

Average();

AverageGeometric();

QuadraticMean();

Console.ReadLine();

}

static void Average()

{

Program arrayObject = new Program();

Random rnd = new Random();

arrayObject.array = new int[100];

int sum = 0;

for (int i = 0; i < 100; i++)

{

arrayObject.array[i] = rnd.Next(0, 1000);

sum += arrayObject.array[i];

Console.Write("\t"+ arrayObject.array[i]);

}

int average = sum / 100;

Console.WriteLine("\n" + $"Среднее арифметическое случайных чисел равно {average}" + "\n");

}

static void AverageGeometric()

{

Program arrayObject = new Program();

Random rnd = new Random();

arrayObject.array1 = new double[100];

double product = 1;

double averageGeometric;

for (int i = 0; i < 100; i++)

{

arrayObject.array1[i] = rnd.Next(0, 100);

product \*= arrayObject.array1[i];

Console.Write("\t"+ arrayObject.array1[i]);

}

averageGeometric = Math.Pow(product, 1.0 / 100.0);

Console.WriteLine("\n" + $"Среднее геомметрическое случайных чисел равно {averageGeometric}" + "\n");

}

static void QuadraticMean()

{

Program arrayObject = new Program();

Random rnd = new Random();

arrayObject.array = new int[100];

double quadraSum = 0;

double averageQuadro;

for (int i = 0; i < 100; i++)

{

arrayObject.array[i] = rnd.Next(0, 1000);

quadraSum += Math.Pow(arrayObject.array[i], 2);

Console.Write("\t" + arrayObject.array[i]);

}

averageQuadro = Math.Sqrt(quadraSum / 100);

Console.WriteLine("\n" + $"Среднее квадратичное случайных чисел равно {averageQuadro}" + "\n");

}

}

}