1.     Write a program that **reads** from the console **three numbers** of type **int** and prints their sum.

using System;

namespace exercise1Chapter4

{

class Program

{

static void Main(string[] args)

{

Console.Write("Enter number 1: ");

int a = Int32.Parse(Console.ReadLine());

Console.Write("Enter number 2: ");

int b = Int32.Parse(Console.ReadLine());

Console.Write("Enter number 3: ");

int c = Int32.Parse(Console.ReadLine());

Console.WriteLine("Result is {0}", a + b + c);

}

}

}

2.     Write a program that **reads** from the console the **radius** "**r**" of a circle and prints its **perimeter** **and area**.

using System;

public class Exercise5

{

public static void Main()

{

double r, per\_cir;

double PI = 3.14;

Console.WriteLine("Radius : ");

r = Convert.ToDouble(Console.ReadLine());

per\_cir = 2 \* PI \* r;

Console.WriteLine("Perimeter of Circle : {0}", per\_cir);

Console.Read();

}

}

3.     A given company has name, address, phone number, fax number, web site and manager. The manager has name, surname and phone number. Write a program that **reads information about the company** and its manager and then **prints it** on the console.

using System;

namespace detyra3

{

using System;

class PrintCompanyInformation

{

static void Main()

{

Console.Write("Please write your company name: ");

string companyName = Console.ReadLine();

Console.Write("Please write your company address: ");

string companyAddress = Console.ReadLine();

Console.Write("Please write your phone number: ");

long phoneNumber = long.Parse(Console.ReadLine());

Console.Write("Please write your fax number: ");

long faxNumber = long.Parse(Console.ReadLine());

Console.Write("Please write your company web-site: ");

string webSite = Console.ReadLine();

Console.Write("Please write Manager's first name: ");

string firstName = Console.ReadLine();

Console.Write("Please write Manager's last name: ");

string lastName = Console.ReadLine();

Console.Write("Please write Manager's age: ");

byte ageManager = byte.Parse(Console.ReadLine());

Console.Write("Please write Manager's phone: ");

long phoneManager = long.Parse(Console.ReadLine());

Console.WriteLine("{0}", companyName);

Console.WriteLine("Adress: {0}", companyAddress);

Console.WriteLine("Tel. {0}", phoneNumber);

Console.WriteLine("Fax. {0}", faxNumber);

Console.WriteLine("Web-site: {0}", webSite);

Console.WriteLine("Manager: {0}" + " " + "{1}" + " " + "(age: {2}," + " " + "tel.: {3})", firstName, lastName, ageManager, phoneManager);

}

}

}

4.     Write a program that **prints three numbers in three virtual columns** on the console. Each column should have a width of 10 characters and the numbers should be **left aligned**. The first number should be an integer in **hexadecimal**; the second should be **fractional positive**; and the third – a **negative fraction**. The last two numbers have to be rounded to the second decimal place.

5.     Write a program that reads from the console two integer numbers (**int**) and prints how many numbers between them exist, such that **the remainder of their division by 5 is 0**. Example: in the range (14, 25) there are 3 such numbers: 15, 20 and 25.

using System;

namespace Detyra5

{

class Program

{

static void Main(string[] args)

{

int counter = 0;

Console.Write("Enter first number: ");

int a = Int32.Parse(Console.ReadLine());

Console.Write("Enter second number: ");

int b = Int32.Parse(Console.ReadLine());

for (int i = a; i <= b; i++)

{

if (i % 5 == 0) counter++;

}

Console.WriteLine("{0} numbers found.", counter);

}

}

}

6.     Write a program that reads two numbers from the console and **prints the greater of them**. Solve the problem without using conditional statements.

using System;

class NumberComparer

{

static void Main()

{

Console.WriteLine("First number: ");

double firstNumber = double.Parse(Console.ReadLine());

Console.WriteLine("Second number: ");

double secondNumber = double.Parse(Console.ReadLine());

double compareNumbers = Math.Max(firstNumber, secondNumber);

Console.WriteLine("Number {0} is greater", compareNumbers);

}

}

7.     Write a program that **reads five integer numbers and prints their sum**. If an invalid number is entered the program should prompt the user to enter another number.

8.     Write a program that reads five numbers from the console and prints the **greatest** of them.

using System;

namespace Detyra8

{

class Program

{

static void Main(string[] args)

{

Console.Write("Enter first number");

int a = Int32.Parse(Console.ReadLine());

Console.Write("Enter second number");

int b = Int32.Parse(Console.ReadLine());

Console.Write("Enter third number");

int c = Int32.Parse(Console.ReadLine());

Console.Write("Enter fourth number");

int d = Int32.Parse(Console.ReadLine());

Console.Write("Enter fifth number");

int e = Int32.Parse(Console.ReadLine());

if (a > b && a > c && a > d && a > e) Console.WriteLine("{0} is the biggest.", a);

else if (b > a && b > c && b > d && b > e) Console.WriteLine("{0} is the biggest.", b);

else if (c > a && c > b && c > d && c > e) Console.WriteLine("{0} is the biggest.", c);

else if (d > a && d > b && d > c && d > e) Console.WriteLine("{0} is the biggest.", d);

else if (e > a && e > b && e > c && e > d) Console.WriteLine("{0} is the biggest.", e);

else Console.WriteLine("There isn't a biggest number.");

}

}

}

9.     Write a program that reads an integer number **n** from the console. After that reads **n** numbers from the console and prints their **sum**.

using System;

public class Program

{

static void Main(string[] args)

{

int sum = 0;

Console.Write("Enter numbers count: ");

int length = Int32.Parse(Console.ReadLine());

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

{

Console.Write("Enter {0} number: ", i + 1);

sum += Int32.Parse(Console.ReadLine());

}

Console.WriteLine("Sum of all numbers is {0}.", sum);

}

}

10.   Write a program that reads an integer number **n** from the console and **prints** **all numbers in the range** **[1…n]**, each on a separate line.

using System;

namespace Detyra10

{

class Program

{

static void Main(string[] args)

{

int sum = 0;

Console.Write("Enter number: ");

int length = Int32.Parse(Console.ReadLine());

for (int i = 1; i <= length; i++)

{

Console.WriteLine(i);

}

}

}

}

11.   Write a program that prints on the console the first 100 numbers in the **Fibonacci sequence**: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, …

using System;

namespace Detyra11

{

static void Main(string[] args)

{

int num1 = 0;

int num2 = 1;

int sum = 1;

int count = 0;

Console.WriteLine(num1);

while (count < 100)

{

sum = num1 + num2;

num1 = num2;

num2 = sum;

Console.WriteLine(num2);

count++;

}

}

}

12.   Write a program that calculates the **sum** (with **precision of 0.001**) of the following sequence: 1 + 1/2 - 1/3 + 1/4 - 1/5 + …

using System;

namespace Detyra12

{

class Program

{

static void Main(string[] args)

{

Console.Write("Enter last number: ");

int length = Int32.Parse(Console.ReadLine());

double sum = 1.0;

for (int i = 2; i <= length; i++)

{

sum += (1.0 / i);

}

Console.WriteLine("{0:F3}", sum);

}

}

}