# Lab: Data Types and Variables

Submit your solutions here: <https://judge.softuni.org/Contests/4625/Data-Types-and-Variables-Lab>

## Days to Minutes

Write a program to convert **days to minutes**:

* Read a single **integer** (the **days** to be converted)
* Convert the days to minutes (1 day = 24 hours \* 60 minutes)
* Print the **minutes** in the following format**: "Minutes = {calculated minutes}"**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| 2 | Minutes = 2880 |
| 5 | Minutes = 7200 |
| 7 | Minutes = 10080 |

int Days=int.Parse(Console.ReadLine());

int DayToMin = 24 \* 60;

int calcMinutes = Days \* DayToMin;

Console.WriteLine("Minutes = " +calcMinutes);

## Calculate Speed

Write a program that:

* Read **two floating-point numbers**: **distance** and **time**
* Calculate the speed needed to travel the specified distance for the specified time: **speed = distance / time**
* Print the **calculated speed** formatted to **2nd digit**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| 15  2 | 7.50 |
| 15  2.2 | 6.82 |

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

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

double speed=dist/time;

Console.WriteLine(speed.ToString("0.00"));

## Circle Area and Perimeter

Write a program to calculate a **circle area and perimeter**:

* Read **one floating-point number**: the **radius of a circle**
* Calculate the **area** and the **perimeter** of a circle using formulas:
  + **area = radius \* radius \* pi**
  + **perimeter = 2 \* pi \* radius**
* Print the calculated values formatted to the 2nd digit after the decimal point in the following format:

**"Area = {area}"**

**"Perimeter = {perimeter}"**

**double radius =double.Parse(Console.ReadLine());**

**double pi = Math.PI;**

**double area = radius \* radius \* pi;**

**double perimeter = 2 \* pi \* radius;**

**Console.WriteLine("Area = " + area.ToString("0.00"));**

**Console.WriteLine("Perimeter = " +perimeter.ToString("0.00"));**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| 7 | Area = 153.94  Perimeter = 43.98 |

## Convert Meters to Kilometers

Write a program that:

* Read a **floating-point number** (the **distance in meters**)
* Convert given **meters to kilometers** (1 km = 1000 meters)
* Print the **kilometers formatted** to the 2nd digit after the decimal point
* double DistInM=Double.Parse(Console.ReadLine());
* double Km = DistInM / 1000;
* Console.WriteLine(Km.ToString("0.00"));

|  |  |
| --- | --- |
| **Input** | **Output** |
| 1852.4 | 1.85 |
| 798.3 | 0.80 |

## Convert Celsius to Fahrenheit

Write a program that:

* Read a **floating-point number** (the **temperature in Celsius**)
* Convert given **temperature in Fahrenheit (1 Fahrenheit = 1 Celsius \* 1.8 + 32)**
* Print the **temperature in Fahrenheit** formatted to the 2nd digit after the decimal point

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

double Fahrenheit = Celsius \* 1.8 + 32;

Console.WriteLine(Fahrenheit.ToString("0.00"));

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| 37 | 98.60 |
| 100 | 212.00 |

## Pets Food

Write a program that:

* Reads **two integer numbers**: **count packages dog food** and **count packages cat food**
* Calculate the expenses for pet's food, if you know that:
  + one package dog food costs 2.50 leva
  + one package cat food costs 4.00 leva
* Print the **calculated expenses** formatted to **2nd digit** in the following format:

**"{expenses} lv."**

**int dogFood=int.Parse(Console.ReadLine());**

**int catFood=int.Parse(Console.ReadLine());**

**double dogCosts = dogFood \* 2.50;**

**double catCosts = catFood \* 4;**

**double expenses = dogCosts+catCosts;**

**Console.WriteLine(expenses.ToString("0.00") + " " + "lv" + ".");**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| 5  4 | 28.50 lv. |
| 13  9 | 68.50 lv. |

## Projects Creation

Write a program that:

* Reads **text (architecture's name)** and **integer number (count of projects for creation)**
* Calculate how many hours will be needed for projects creation, if you know:
  + one project creation takes **3 hours**
* Print the **data** in the following format**:**

**"The architect {architecture's name} will need {needed hours} hours to complete {count of projects for creation} project/s."**

### Example

|  |  |
| --- | --- |
| **Input** | **Output** |
| George  4 | The architect George will need 12 hours to complete 4 project/s. |
| Sanya  9 | The architect Sanya will need 27 hours to complete 9 project/s. |

string archName=Console.ReadLine();

int number=int.Parse(Console.ReadLine());

int projTime = number \* 3;

Console.WriteLine("The architect"+" "+archName + " "+"will need" +" "+ projTime +" "+ "hours to complete " + number +" " +"project/s.");