# Exercises: C# Intro and Basic Syntax

Problems for exercises and homework for the

## Problem 1. Debit Card Number

Write a program, which receives **4 integers** on the console and **prints them** in **4-digit debit card format**. See the examples below for the appropriate formatting.

### Examples

| Input | Output |
|---|---|
| 12<br>433<br>1<br>5331 | 0012 0433 0001 5331 |
| 9182<br>4221<br>12<br>3 | 9182 4221 0012 0003 |
| 812<br>321<br>123<br>22 | 0812 0321 0123 0022 |

## Problem 2. Rectangle Area

Write a program, which calculates a **rectangle's area**, based on its **width** and **height**. The **width** and **height** come as floating point numbers on the console, **formatted to the 2$^{nd}$ character after the decimal point**.

### Examples

| Input | Output |
|---|---|
| 2<br>7 | 14.00 |
| 7<br>8 | 56.00 |
| 12.33<br>5 | 61.65 |

## Problem 3. Miles to Kilometers

Write a program, which **converts miles** to **kilometers**. **Format** the output to the **2$^{nd}$ decimal place**.

Note: **1 mile == 1.60934 kilometers**

## Examples

| Input | Output |
|-------|--------|
| 60 | 96.56 |

| Input | Output |
|-------|--------|
| 1 | 1.61 |

| Input | Output |
|---------|--------|
| 52.1113 | 83.86 |

# Problem 4. Beverage Labels

Write a program, which reads a food product **name**, **volume**, **energy content per 100ml** and **sugar content per 100ml**. Calculate the **energy** and **sugar content** for the **given volume** and print them on the console in the following format:

- Name – as per the input
- Volume – **integer**, **suffixed** by "ml" (e.g. "**220ml**")
- Energy content – **integer**, **suffixed** by "kcal" (e.g. "**500kcal**")
- Sugar content – **real number**, **suffixed** by "g" (e.g. "**30g**")

## Examples

| Input | Output |
|-------|--------|
| Nuka-Cola<br>220<br>300<br>70 | 220ml Nuka-Cola:<br>660kcal, 154g sugars |

| Input | Output |
|-------|--------|
| Ice Cold Nuka-Cola<br>250<br>350<br>65 | 250ml Ice Cold Nuka-Cola:<br>875kcal, 162.5g sugars |

| Input | Output |
|-------|--------|
| Nuka-Cola Quantum<br>350<br>600<br>140 | 350ml Nuka-Cola Quantum:<br>2100kcal, 490g sugars |

# Problem 5. * Character Stats

Write a program, which **displays information** about a video game character. You will receive their **name**, **current health**, **maximum health**, **current energy** and **maximum energy** on separate lines. The **current** values will **always** be valid (**equal or lower** than their respective **max** values). Print them in the format as per the examples.

## Examples

| Input | Output |
|-------|--------|
| Mayro<br>5<br>10<br>9<br>10 | Name: Mayro<br>Health: \|\|\|\|\|\|.....\|<br>Energy: \|\|\|\|\|\|\|\|\|.\| |

| Input | Output |
|-------|--------|
| Bauser<br>10<br>10<br>10<br>10 | Name: Bauser<br>Health: \|\|\|\|\|\|\|\|\|\|\|\|<br>Energy: \|\|\|\|\|\|\|\|\|\|\|\| |

| Input | Output | Input | Output |
|---|---|---|---|
| Loogi<br>8<br>20<br>2<br>14 | Name: Loogi<br>Health: \|\|\|\|\|\|\|\|\|............\|<br>Energy: \|\|\|............\| | Toad<br>0<br>5<br>0<br>10 | Name: Toad<br>Health: \|.....\|<br>Energy: \|..........\| |

## Hints

- You can print a character **multiple** times, using **new string(character, count)**.