# C# Basics: Exam Problems

## Problems

Each exam problem consists of:

* A detailed **description** of the problem
  + Input format description
  + Output format description
  + Constraints (input data constraints, time limit, memory limit)
  + Sample input and output
* Author’s **solution** of the problem (not available during the exam)
* 10 or more **tests** (not available during the exam)

## Calculations without Loops

* Simple calculations
* Use if-s / nested if-s
* **Don’t** use loops
* Solution up to **20 lines** of code
* Up to **1 page A4** with the input/output

## Simple Loop

* One simple loop
* Use one while / do-while / for / foreach loop
* Solution up to **50 lines** of code
* Up to **1 page A4** with the input / output

## Draw a Figure on the Console

* Printing a simple figure on the console
* Maximum one nested loop
* Solution up to **70 lines** of code
* Up to **1 page A4** with the input / output

## Nested Loops

* More complex than the third problem – e.g. generate some number(s)
* Solution up to **100 lines** of code
* Up to **1 page A4** with the input/output

## Bitwise Operators

* Not too hard to solve – use some bitwise operations over a number/some numbers
* Solution up to **120 lines** of code
* Up to **1 page A4** with the input/output