1) *using System*; // *System* is a ***namespace*** in C#
using System vs. *import*

2) public class Test { ← *Doesn't need to match file name*

3) public static void Main() {
Main() vs. main (String [ ] args)

4) **Data types** are the same except:

-*bool* (vs. boolean)

-*string* (vs. String)

(In C#, *string* is an ***alias*** for **System.String** … compiles to same code)

5) **Arithmetic operators** are the same (+ - / * %)

- Conditionals (if-else, switch) / Loops are the same
- Comments are the same

6) **Output** - *Console.WriteLine*/*Write*
(vs. *System.out.println/print*)

7) **Input -** *Console.ReadLine()*, ***Convert****.ToInt32* (string)
Convert*.ToDouble* (string)
(vs. System.in/Scanner)

int: 32-bits (4 bytes) … 2^{31} = +/- 2.1 billion - Convert.**ToInt32**
short (int): 16-bits (2 bytes) … 2^{15} = +/- 32,767 - Convert.**ToInt16**
long (int): 64-bits (8 bytes) … 2^{63} = +/- 9.2E18 - Convert.**ToInt64**

int is an ***alias*** for **System.Int32** / **double** is an ***alias*** for **System.Double**
…compiles to same code

8) Character Conversion / Input

Converting string → char

// throws exception if string (*name*) is not exactly one char

char ch = *Convert.ToChar(response)*;

// Better – strings in C# can be referenced like a *char array*

char ch = response[0];

Character Input

string grade = Console.ReadLine();
char g = grade[0];

9) Converting a *string* (s) into a *Character Array*
(2 different data types)

char [ ] charArray = s.ToCharArray();

10) 1D Arrays declared the same as in Java

2D Arrays: int [,] grid = new int [3,4];

[0,0]			**[0,3]**
		[1,2]	
	[2,1]		**[2,3]**

METHOD GetLength (**not** *data property* Length)

grid.GetLength(0) = dimension 1 … returns number of *rows*
grid.GetLength(1) = dimension 2 … returns num of *columns*