LEXICON

EXERCISE

Operators and expressions

1. Purpose

Use the "Console.WriteLine()" method to train your comprehension of how expressions evaluate and in which order operators have priority.

2. Setup

Open your console app if you already have one or start a new from the template in Visual Studio. In the exercises on the following pages, several expressions will be listed. First try to figure out the result of the expression. Then either replace the previous expression in your Console.WriteLine() method or add a new line and method. Run the app and check the actual result. There are three pages of expressions. Wait a while between each set of exercises. Do something else in this period.

3. Reference

<u>The expressions use a couple of types:</u>

- Text are of type *string*.
- Numbers are of type *int*.
- The either or value false and true is of type *bool*.

<u>Operators evaluates in the following order:</u>

Statements within ()	Parentheses
*, /, %	Multiplication / Division / Modulus
+, -	Addition / Subtraction
==, !=, <, >, >=, <=	Comparisons
&&, ||	AND / OR
? :	Ternary Operators
=	Assignment Operators

1 == 1	EQUAL TO
1 != 2	NOT EQUAL TO
1 < 2	LESS THAN
1 <= 2 and 1 <= 1	LESS THAN OR EQUAL TO
2 > 1	GREATER THAN
2 >= 1 and 1 >= 1	GREATER THAN OR EQUAL TO
true && true	AND, joins two comparisons, true if both are true
true || false	OR, joins two comparisons, true if either is true
true ^ false	XOR, joins two comparisons, true if one is true, but not both

Exercise 1

```
"Hello" + " " + "World!"
2 + 4
"2" + "4"
2 + "4"
"2" + 4 + 7
3 + 5 + "=" + 3 + 5
6 + 2 + "3"
"Two" + "Three"
1 + 2 + "Three"
4 > 2
34 < 32 + 4
33 != 33
34 - 2 == 36
34 + 2 != 36
34 + 2 >= 36
34 - 2 > 36
4 == 4 ? "One" :  "Two"
```

Exercise 2

```
1 + " " + "="
3 + 6 * 2
"2" + 3 * 2
2 + 3 + "4" + 4 / 2
"2" + 7 - 4
7 / 3
2 * ( 4 + 2)
3 + ( 5 + "G")
1+ 4 / 3
3 == 3 && 4 != 6
3==4 || 4 != 4
4 > 9 ? "Lucene" : 4 + 89
```

Exercise 3

```
"No" + " " + "way"
4 + 6
"3" + "9"
1123 + "23"
"43" + 2 + 5
100 + " " + "+"
56 + 5 * 6
"1" + 1 * 1
1 + 11 + "1" + 11 / 11
"34" + 2 - 1
13 / 2
4 * ( 5 - 3)
9 + ( 2 + "OH")
12 + 12 / 4
9 == 9 && 893 != 891 + 2
8 == 4 / 2 || 4 != 4 / 2
2 + 8 + "=" + 2 + 8
45 - 40 == 50 ? 3 + 6 : 6 + "3"
```