# The Modulus operator ( % )

(a.k.a. the Remainder operator)

**The goal for this exercise** is to add some more detail to how math is done in C#. Specifically, the goal is to understand the basics of the modulus operator, so that if you need to get the remainder of dividing one number by another number in a larger program (such as a homework assignment), you will know to use this operator.

**What you need to do for this exercise:**  In the starter project that has been provided to you, fill in code in the Modulus\_Operator. RunExercise method that will obtain two numbers, and then do two things with those numbers:

1. print out the results of doing integer division on the two numbers
2. print out the results of using the modulus (remainder) operator on the two numbers

 Start by just doing the work directly in the code (i.e., you write the numbers directly into the program, and print out the results), then spruce it up a bit by allowing the user to input the two numbers that your program will be dividing.

You should do any background reading, viewing of any online videos, math problems done with paper and pencil, etc, that you need to, so that you completely understand the modulus operator, what it does, and how to use it. You must be able to explain what the operator does, and be able to do this operation by hand, in addition to being able to correctly use this operator in code (in your programs). In other words, if you saw an exam question like the following, you should be able to write out the answer without problem:

**Sample Exam Question:**

Write out (in the space provided below) what the following program will print:

class MainProgram

{

 [STAThread]

static void Main(string[] args)

{

 int x = 3, y = 5;

 int z = 10;

 Console.WriteLine( x % y );

 Console.WriteLine( y % x );

 Console.WriteLine( x % x );

 Console.WriteLine( x % 2 );

 Console.WriteLine( (x+z) % y );

}

}