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The *derivative* of a function measures the sensitivity to change of a quantity (a function value or dependent variable) which is determined by another quantity (the independent variable).

In this challenge you don't have to know all the details about how it is calculated. The only thing you need to know is this: if y = a \* xb, then its*derivative* is calculated as y' = a \* b \* xb - 1.

You are given some function in the format"y=ax^b" where a and b are integers, and x is a variable denoted by some lowercase Latin letter. Calculate its *derivative* and return it as a string in format y'=Ax^B".

**Example**

* For equation = "y=3x^2", the output should be  
  simpleDerivativeCalculator(equation) = "y'=6x^1".
* For equation = "y=12t^3", the output should be  
  simpleDerivativeCalculator(equation) = "y'=36t^2".
* **[input] string equation**

An equation in the format described above.

* **[output] string**

*Derivative* of the given equation.

<https://codefights.com/challenge/Fybz7tCDC97qBxdPs>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

namespace ConsoleApplication1

{

class Program

{

static string simpleDerivativeCalculator(string equation)

{

//busco los numeros

int indigual = equation.IndexOf("=");

int indpot = equation.IndexOf("^");

string a = "", b = "";

for (int i = indigual; i <= indpot; i++)

{

if (char.IsNumber(equation[i]) || equation[i] =='-' )

{

a += equation[i];

}

}

for (int i = indpot; i < equation.Length; i++)

{

if (char.IsNumber(equation[i]) || equation[i] == '-')

{

b += equation[i];

}

}

//Console.WriteLine("{0} {1}", a, b);

string variable = "";

for (int i = indigual+ 1; i < indpot; i++)

{

if (char.IsLetter(equation[i]))

{

variable += equation[i];

}

}

string ans = "";

int ab = int.Parse(a) \* int.Parse( b);

ans += "y'=" + ab.ToString() + variable+ "^" + (int.Parse(b) - 1).ToString();

return ans;

}

static void Main(string[] args)

{

string equation = "y=208m^-9";

Console.WriteLine(simpleDerivativeCalculator(equation));

Console.ReadLine();

}

}

}