$0/0$
$=$
$(0, X\infty)$

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Contents

1 The Division as an algorithm

1.0.1 The Metalanguage

A pseudocode is a Metalanguage. In a pseudocode, we can define a division as an operation denoted by

```
/
```

This operator has 3 different parts which are :

```
result = MYSTERY
number = number to divide
divisor =  number that divides
```

The result of the division in this pseudocode is

```
result = number / divisor
```

The result is composed of 2 elements which are the quotient and the remainder.

```
result = (result.quotient, result.remainder)
```

1.0.2 The Tought

The compiler is the Tought. A Tought is what is thinking and it can also be called a Machine. A tought is the operation that translates a Metalanguage in a Language.

1.0.3 The Language

A programming language (Language) is the translation of a pseudocode (Metalanguage) by human tought (Tought).

This programming language can than be itself translated into another language, by example, a compiler in order to be executed by a machine.

```
// Initialisation
number = number to divide
divisor =  number that divides
result =  (quotient = 0, remainder = number)
// Computing
while (divisor > result.remainder) {
  result.remainder = number - divisor
  result.quotient = quotient + 1
}
// Result
return result
```

Let's notice that at each step of the iterator, the value of result.remainder and result.quotient varies the same way.

2 The remainder of $0/0$

The variation of the remainder for a single step is :

```
result.remainder = number - divisor
```

When doing MYSTERY = 0 / 0, MYSTERY.remainder = 0 - 0 = 0
When doing the same step n times, we obtain the vector, (0) that we can also write $X(0_n)$

3 The quotient of $0/0$

The variation of the quotient for a single step is :

```
result.quotient = quotient + 1
```

When doing MYSTERY = 0 / 0, MYSTERY.quotient = 0 + 1 = +1

When doing the same step n times, we obtain the vector, (a_n) that we can also write $+(1_n)$

I will now refer to my text on $(+\infty)$ + $(-\infty)$ = 0 to justify that $+(1_n)$ resolves to $(+\infty)$ by saying that +1 is a positive number.

Let's now notice that if we decremented the loop instead of incrementing it, only the sign would change, meaning we would then obtain $(-\infty)$ as a quotient.

4 Conclusion

I will now conclude by saying that there are an infinite possibility for the sign and not only 2 (+ , -). I will demonstrate it in a text talking about symetry.

This infinity of possibilities for the signs are denoted by X.