EXCEL IS POWER

APQ00

Advanced Power Query

"M" STEP BY STEP Beginners Guide (PART I)

M-CODE

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Introduction

- M Language Structure
- Applied Steps
- Expressions & Values
- Value types in M language

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Value types in M language

- Primitive Value
- Function Value
- Structured Data Values

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Structured Data Values

- List
- Record
- Table

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Example

Build a QUERY from scratch using Advanced Editor

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Source

https://docs.microsoft.com/en-us/powerquery-m/

M Language Structure

Each query is composed of **variables**, **expressions**, and **values** encapsulated by a **let** expression

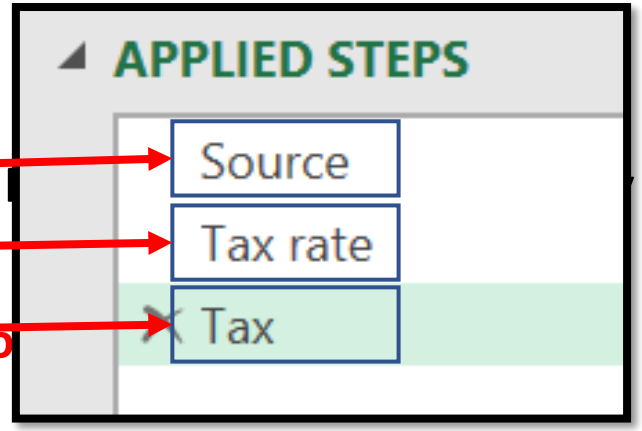
```
let
    Source =Table.FromRecords({[Name="A",Salary=100],[Name="M",Salary=120]}),
    #"Tax rate" = 0.2,
    Tax = List.Sum(Source [Salary]) * #"Tax rate"
in
    Tax
```

An M variable can include spaces by using the # character as #"Step Name"

Applied Steps

Applied steps are variables each representing a **value** or an **expression**

```
let
    Source = Table.FromI                                  = 100],[Name = "M", Salary = 120]}),
    #"Tax rate" = 0.2,
    Tax = List.Sum(So
in
    Tax
```



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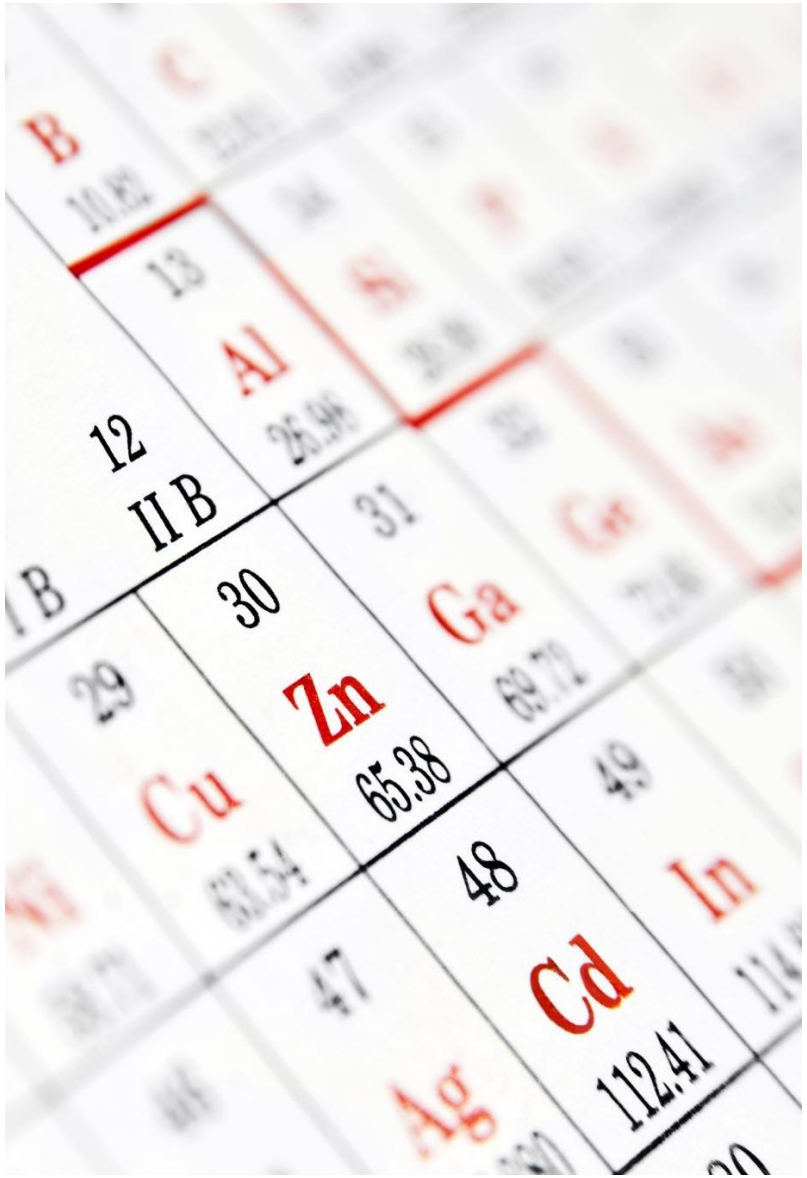


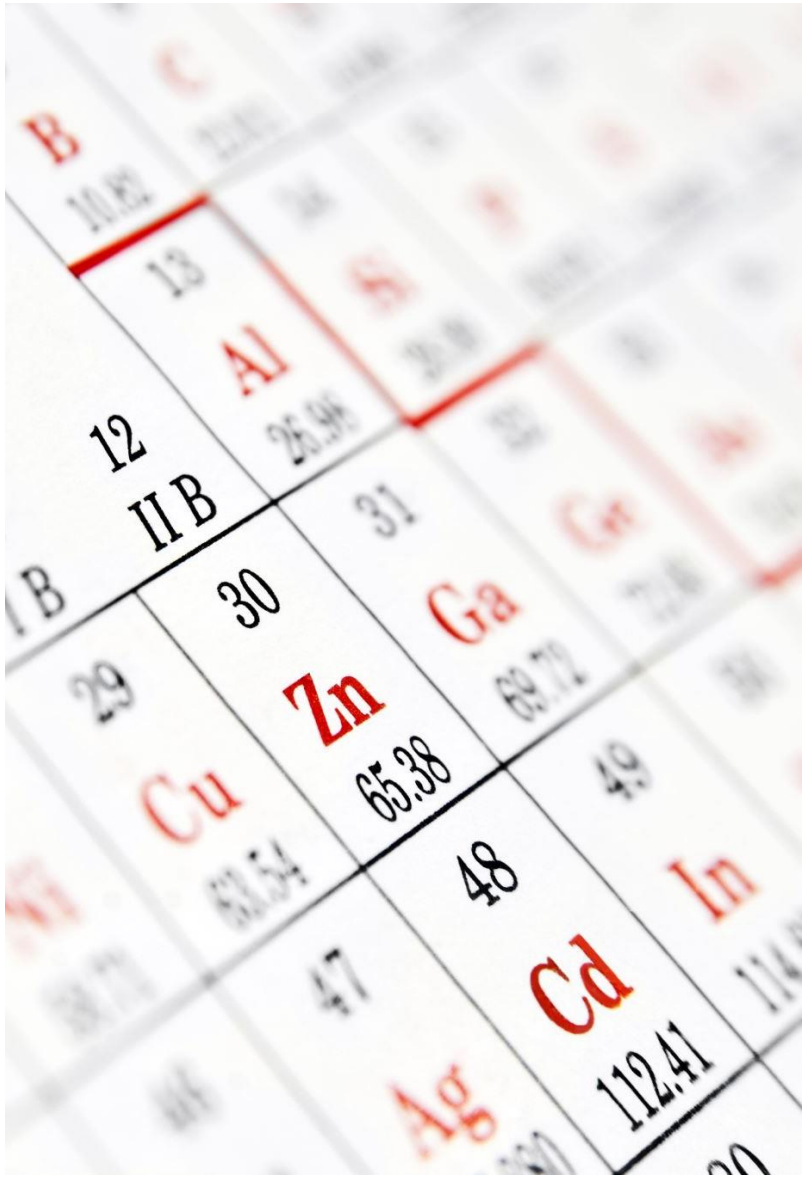
Expressions and values

Expressions are recipes for evaluation; values are the results of evaluation.

For example:

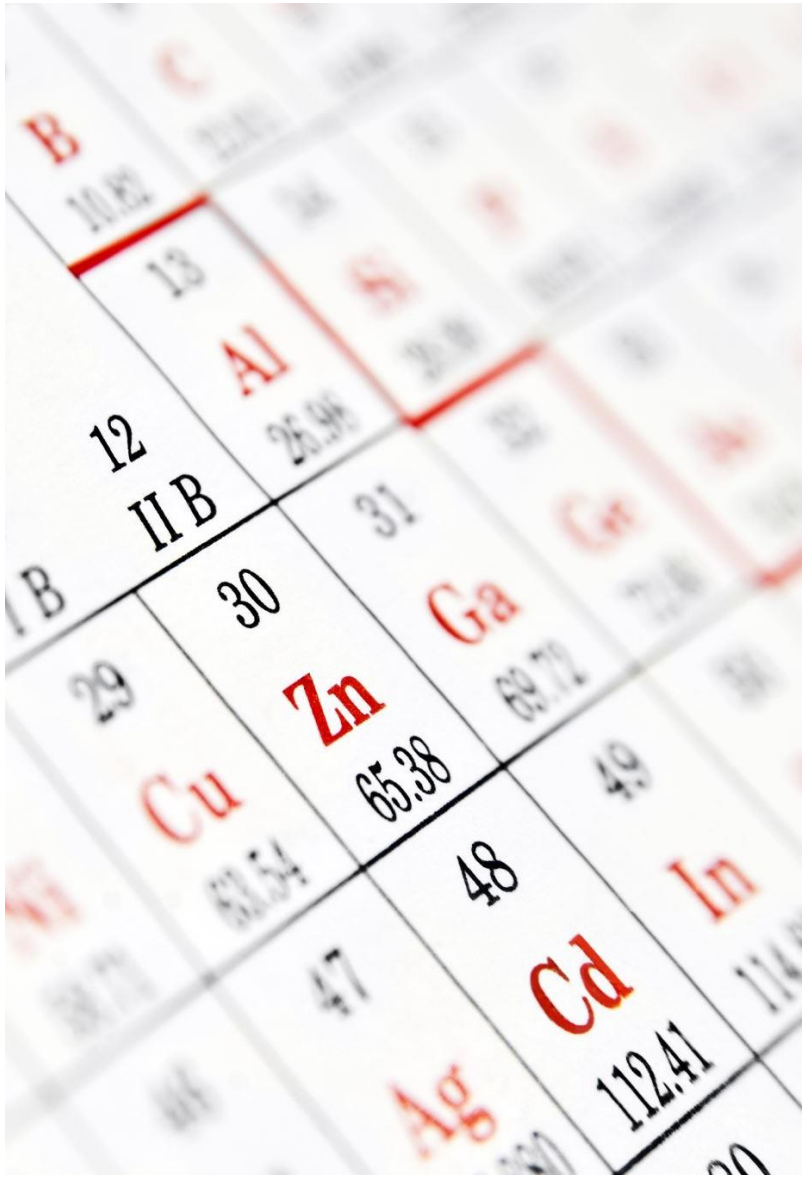
Value: 1 (evaluates to the value 1)

Expression: 1+1 (evaluates to the value 2)



Value types in M language

1. Primitive value
2. Function value
3. Structured data values
    - List
    - Record
    - Table



Types of primitive value

Examples of primitive values

Number: **1,2,3**

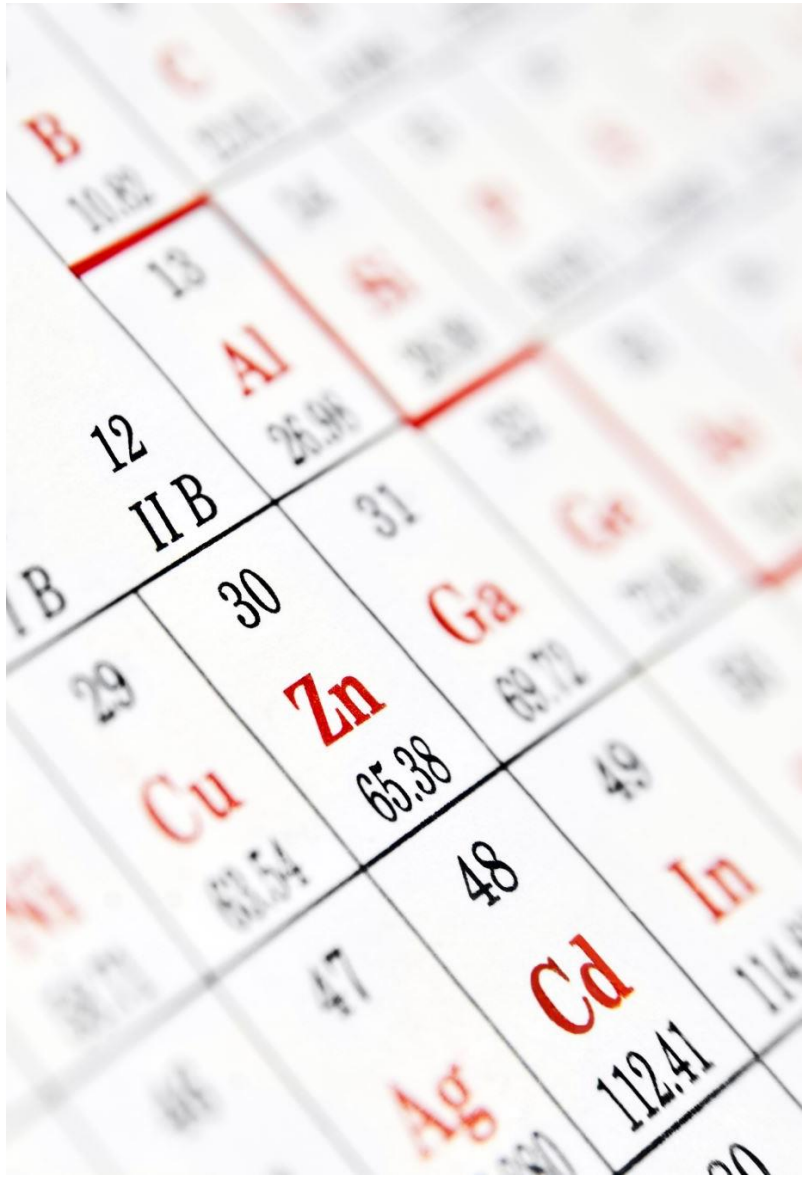
Text: **“abc”**

Date: **5/12/2022** → **#date**(Year,Month,Day)

Time: **12:24:15 PM**

Null: **null**

Logical: **true / false**



Function value

A **Function** is a value that, when **invoked** with arguments, produces a new value

Function creation example: ***MyFunction = (a,b) => a * b***

Invoke function example: ***Result = MyFunctoin(4,4)***

The result will be a value of 16

Function parameters should be listed inside parentheses () followed by goes-to symbol =>