**Primary test**

Tasks:

1. These tests should be written in lisp syntax, the required parts of Lisp syntax will be shown to you at the beginning
2. You don't have to learn the Lisp language completely (don't search Google). The examples given to you provide enough information for you
3. Learn the **sign, multiply** function given in the example
4. Your task is to write the **division** function (operator and functions which are you can only use)
5. In all the examples given to you, you can only use the functions or operators of lisp.

Lisp is the second-oldest high-level programming language after Fortran. It was invented by John McCarthy in 1958. You might have noted that Lisp uses prefix notation.

a \* ( b + c ) / d

will be written as Lisp syntax:

(/ (\* a (+ b c)) d)

Expression syntax sample below:

(function\_name arg1 arg2 … argn)

Built-in functions **you only use** in your tasks

|  |  |
| --- | --- |
| (+ a b), (- a b) | *arithmetic operations* |
| (> a b), (< a b), (= a b) | *comparison operations* |
| (and a b), (or a b), (not a) | *logical operations* |
| (if predicate thenBody elseBody) | *conditional operation* |
| (define spec body) | *defining custom functions* |

**Define function description**

(define (fname arg1 arg2 arg3 … argn)

(body)

)

**Example**

(define (sign n)

(if (> n 0) 1 -1)

)

* (sign 2)

1

* (sign -5)

-1

**Exercises**

**All examples for positive integers**

**Example-1**

(define (\* a b)

(if (= b 1) a

(+ (\* a (- b 1)) a)

)

)

* (\* 3 4)

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**Task-1. *Write a function of division (/).***

(define (/ a b)

…

)