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-- Week 1, Activity 18: Extending our Arithmetic Expressions
-- We'll extend our arithmetic expression processor to include
-- other operations.
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```
local lpeg = require "lpeg"
local pt = require "pt"
```

```
espaco = lpeg.S(" \n\t")^0
vazio = -lpeg.P(1)
sinal = lpeg.S("+^-")^-1
numero = ((sinal * lpeg.R("09")^1) / tonumber) * espaco
operador = lpeg.C(lpeg.S("+^-")) * espaco
```

```
soma = espaco * numero * (operador * numero)^0 * vazio
```

```
print(soma:match("12 + 43 + -43 + 3"))
```

```
-- Traverse the list 2 by 2 elements, and check to
-- verify if we are adding ou subtracting:
```

```
function fold(lst)
    local acc = lst[1]
    for i = 2, #lst, 2 do
        if lst[i] == "+" then
            acc = acc + lst[i + 1]
        else
            acc = acc - lst[i + 1]
        end
    end
    return acc
end
```

```
local soma = espaco * lpeg.Ct(numero * (operador * numero)^0) / fold * vazio
local teste = "32 - 32 + 14 - 1"
print(teste)
print(soma:match(teste))
```