

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

```
local lpeg = require "lpeg"
```

```
espaco = lpeg.S(" \n\t")^0
```

```
vazio = -lpeg.P(1)
```

```
numero = (lpeg.R("09")^1 / tonumber) * espaco
```

```
operador = lpeg.C(lpeg.S("+ -")) * espaco
```

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

```
print(soma:match("12 - 43 + 45 - 90"))
```

```
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 * vaziao
```

```
local teste = "32 - 32 + 14 - 1"
```

```
print(teste)
```

```
print(soma:match(teste))
```