

p := 4      iter := 5

Locally create a vector of zeros of length m and repeat n times

```
test0(m,n) := | for k ∈ 0..n
               | s ← zeros(m,1)
               | s
```

res := test0(size ← 10<sup>p</sup>, iterations ← 10<sup>iter</sup>)

rows(res) = ■      rows(res\_0) = ■

```
test0a(m,n) := | for k ∈ 0..n
                | s_k ← zeros(m,1)
                | s
```

res\_ := test0a(size ← 10<sup>p</sup>, iterations ← 10<sup>iter</sup>)

rows(res\_) = ■      rows(res\_0) = ■

Locally create a vector of ones of length m and repeat n times

```
test1(m,n) := | for k ∈ 0..n
               | s ← ones(m,1)
               | s
```

This already throws a memory error with p=3

res := test1(size ← 10<sup>p</sup>, iterations ← 10<sup>iter</sup>)

rows(res) = ■      rows(res\_0) = ■

subsize := 3

Locally create a nested n-vector of vectors of zeros each of length m

```
test0n(m,n) := | for k ∈ 0..n
                | s_k ← zeros(m,1)
                | s
```

res := test0n(size ← 10<sup>p</sup>, iterations ← 10<sup>subsize</sup>)

rows(res) = ■      rows(res\_0) = ■

Locally create a nested n-vector of vectors of ones each of length m

```
test1n(m,n) := | for k ∈ 0..n
                | s_k ← ones(m,1)
                | s
```

res := test1n(size ← 10<sup>p</sup>, iterations ← 10<sup>subsize</sup>)

rows(res) = 1001      rows(res\_0) = 10000

```
func2(v) := | w ← v + 1
            | w
```

```
test2n(m,n) := | for k ∈ 0..n
                |   v ← zeros(m,1)
                |   sk ← func2(v)
                | s
```

```
res := test2n(size ← 109, iterations ← 10subsize)
rows(res) = 1001           rows(res0) = 10000
```