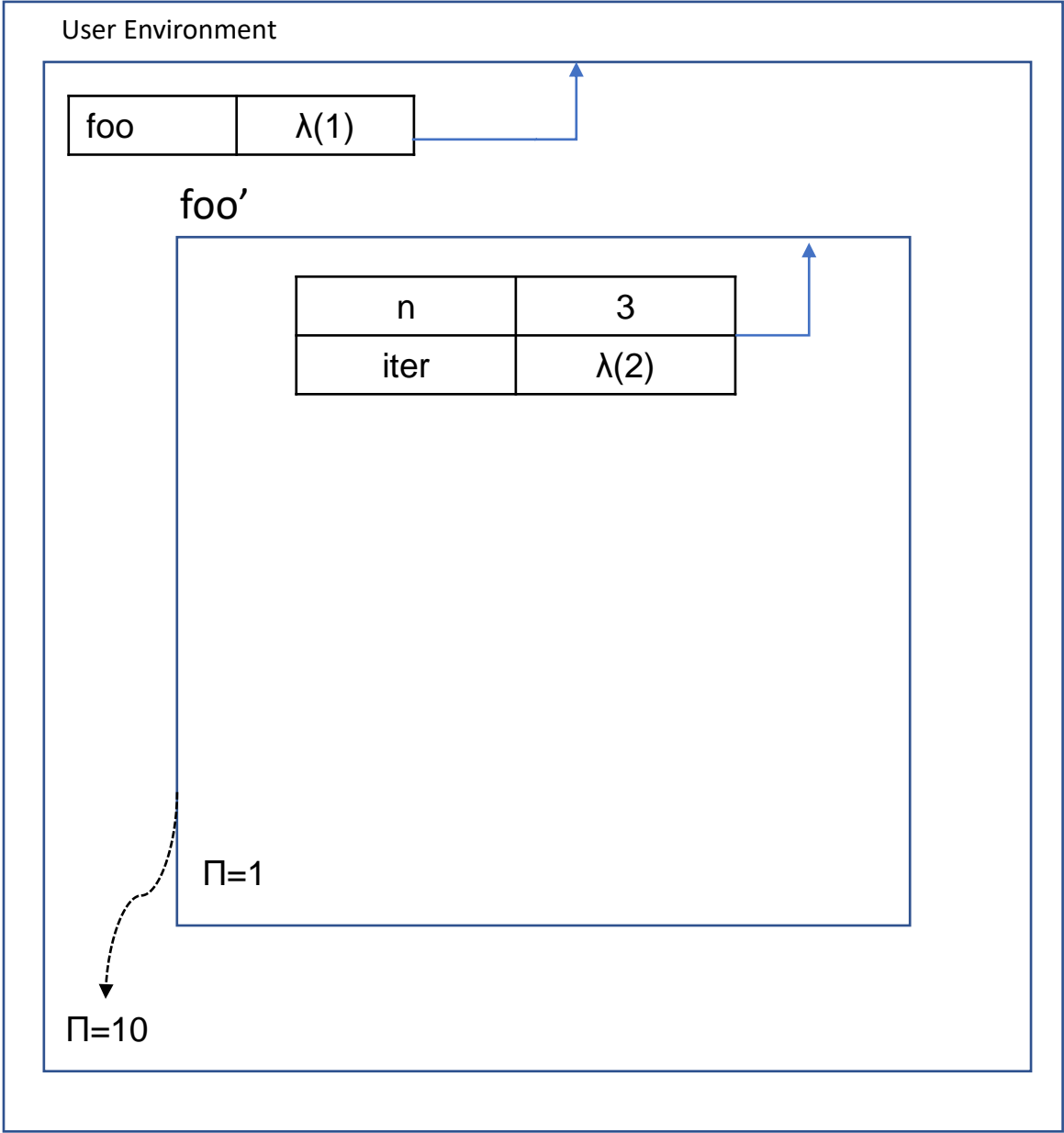


Primitive Environment



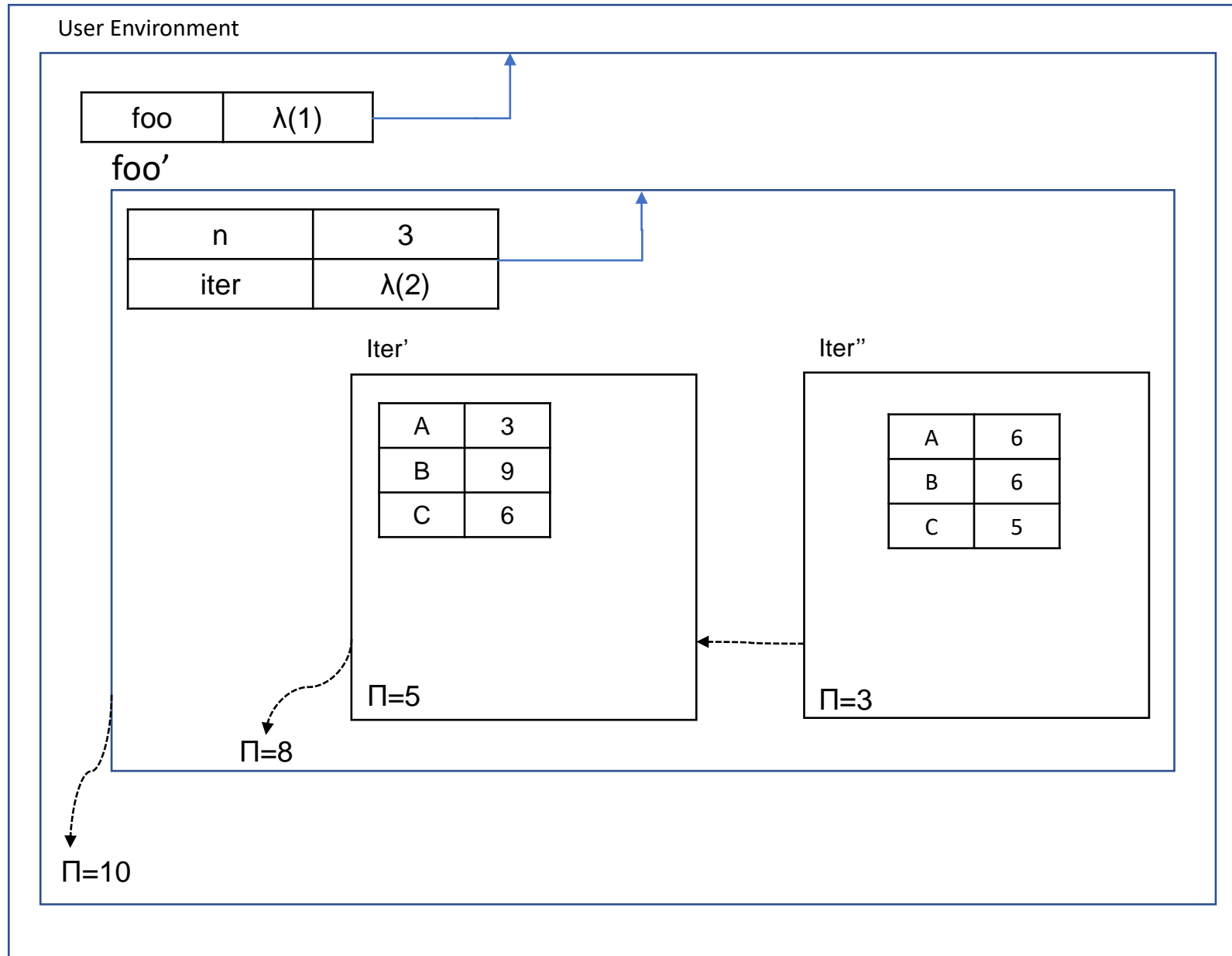
Question 1:

a)

Primitive Environment

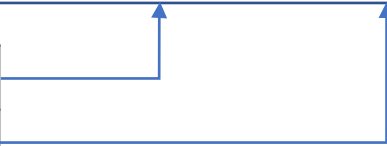
Question 1:

b)



Global Environment

f	$\lambda(1)$
g	$\lambda(6)$



f'

L	'(4 -1 3 7)'
---	--------------

$\Pi=4$

f''

L	'(-1 3 7)'
---	------------

$\Pi=3$

g'

L	'(3 7)'
---	---------

$\Pi=8$

$\Pi=10$

$\Pi=4$

$\Pi=3$

$\Pi=8$

Question 2:

a)

$\Pi=4$

$\Pi=3$

$\Pi=8$

$\Pi=10$

Global Environment

f	$\lambda(1)$
g	$\lambda(6)$

f'

L	'(4 -1 3 7)'
---	--------------

f''

L	'(-1 3 7)'
---	------------

g'

L	'(3 7)'
---	---------

$\Pi=8$

$\Pi=3$

$\Pi=4$

$\Pi=10$

Question 2:

b)

Global Environment

outer	$\lambda(1)$
closure	$\lambda(11)$

closure'

outer'

z	12
y	3
in1	$\lambda(3)$
in2	$\lambda(6)$

in1'

z	9
---	---

$\Pi=5$

$\Pi=9$

$\Pi=11$

$\Pi=12$

Question 3

a)

b) The output should be 9.

Question 3 c)

The code should work dynamically, and the result should be 9, but based off the define of z and the set of z, whether it's dynamic or lexical, won't matter.

This is because if set is run in the code, we end up having
(set! z (* 3 3)) since x = 3 based off of (in2 y) where y = 3 from the beginning

If set is not run in the code, we end up only having
(define z (* 3 3)) since y = 3 based off y = 3 from the beginning