

ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

Informatica di base 2023/2024

WRAP-UP

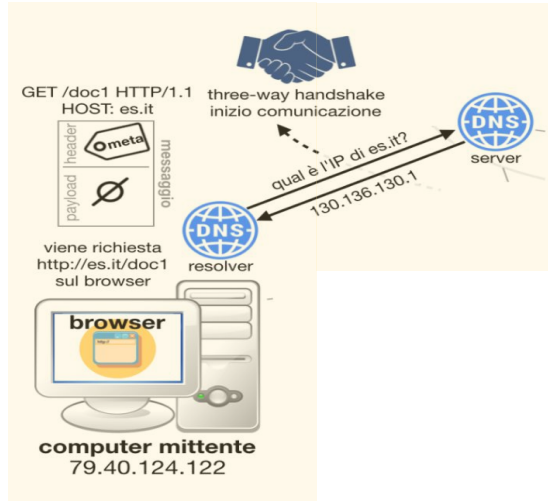
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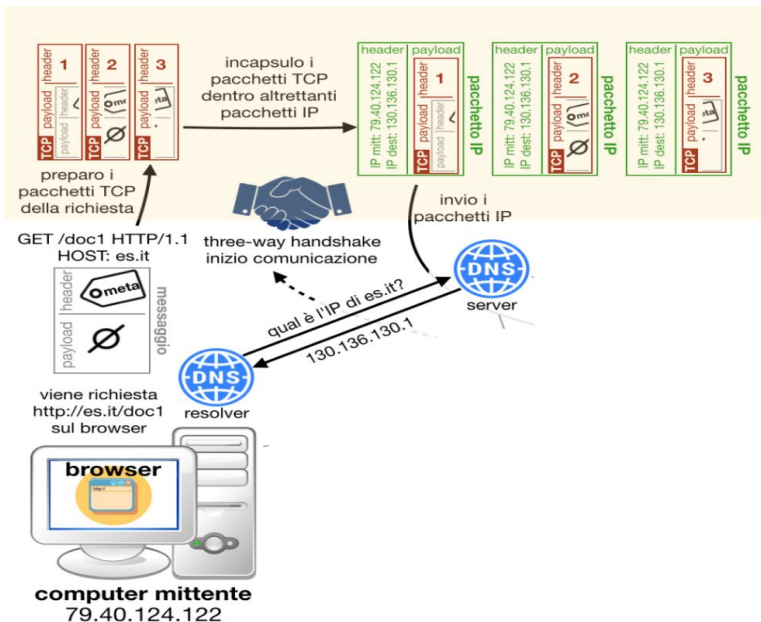
Ivan.heibi2@unibo.it

<https://www.unibo.it/sitoweb/ivan.heibi2>

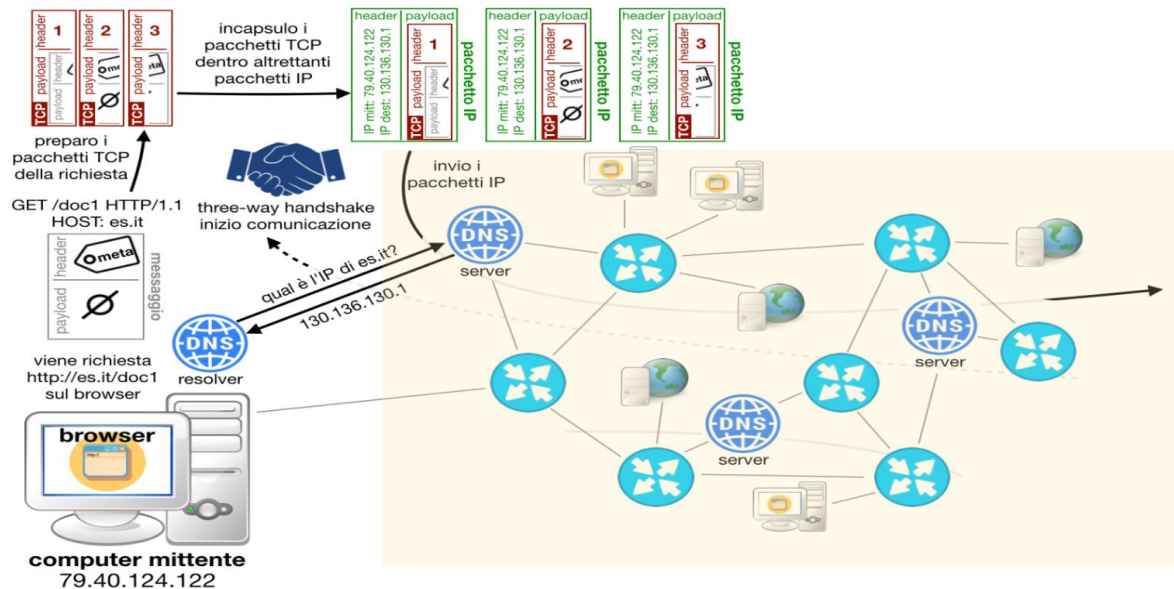
Riassunto comunicazione client - web server



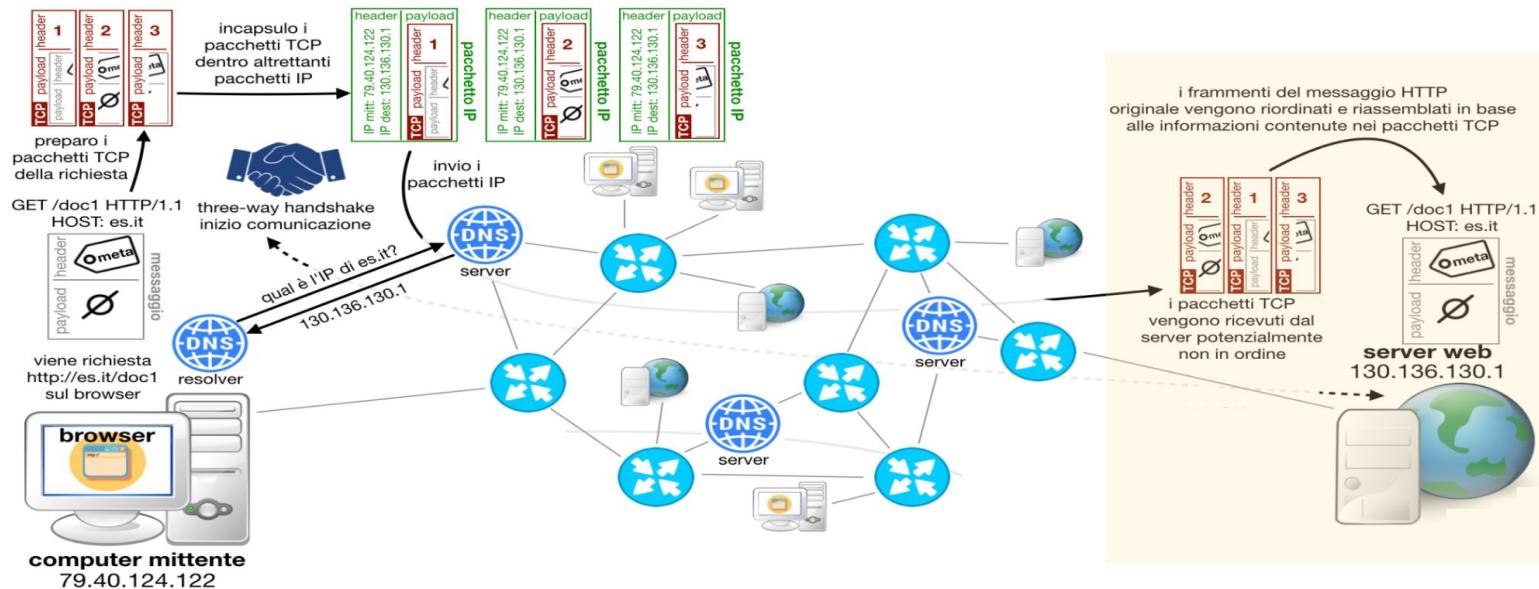
Riassunto comunicazione client - web server



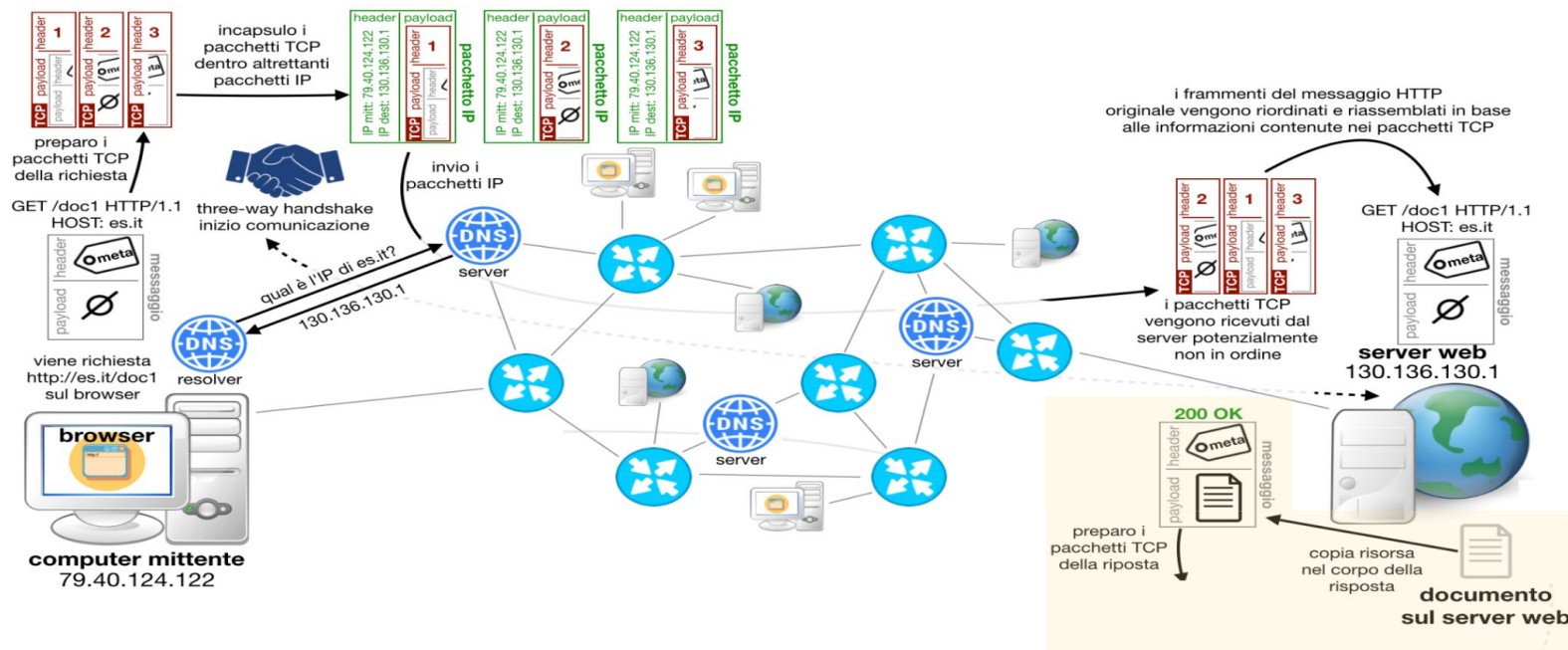
Riassunto comunicazione client - web server



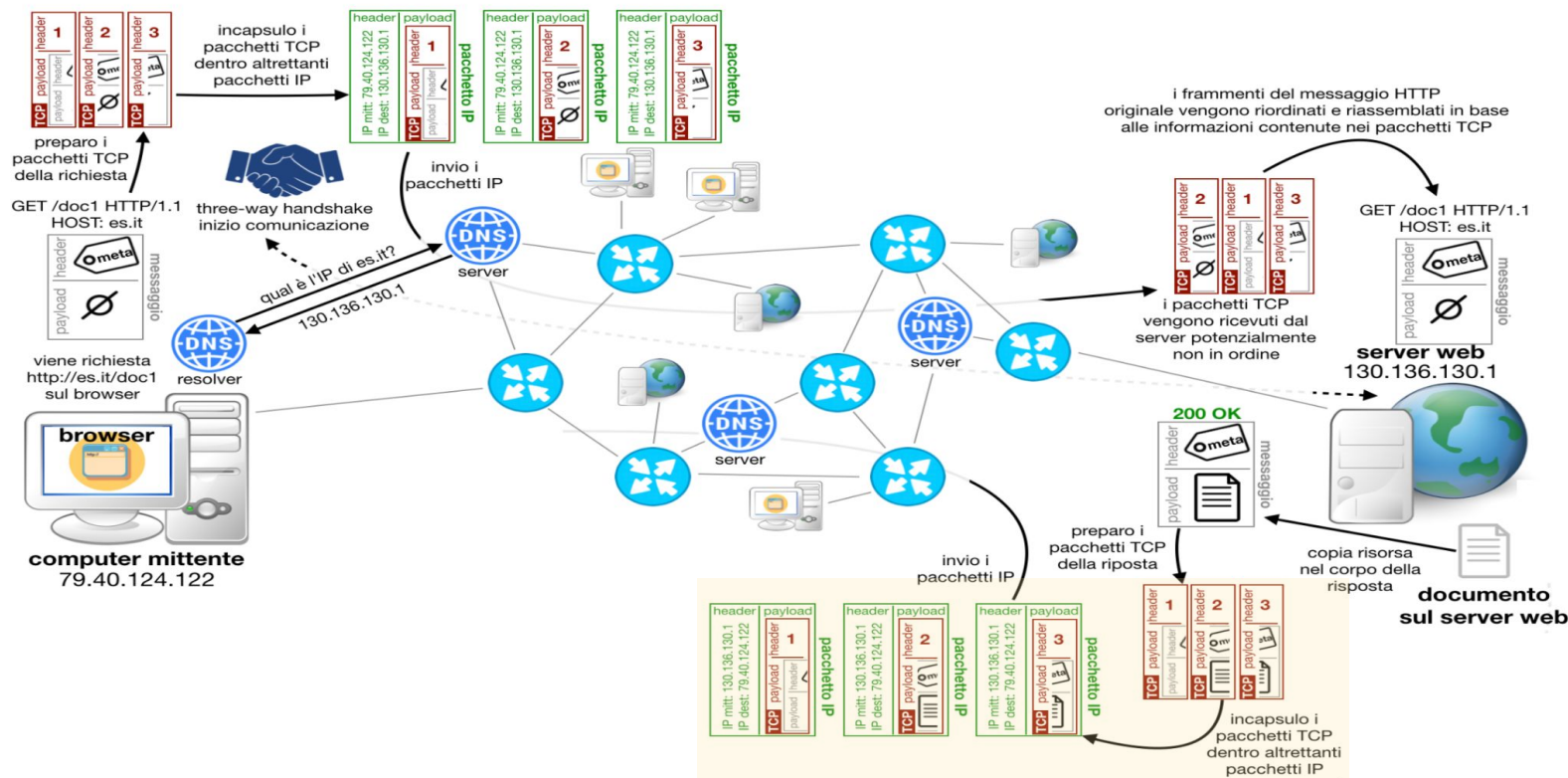
Riassunto comunicazione client - web server



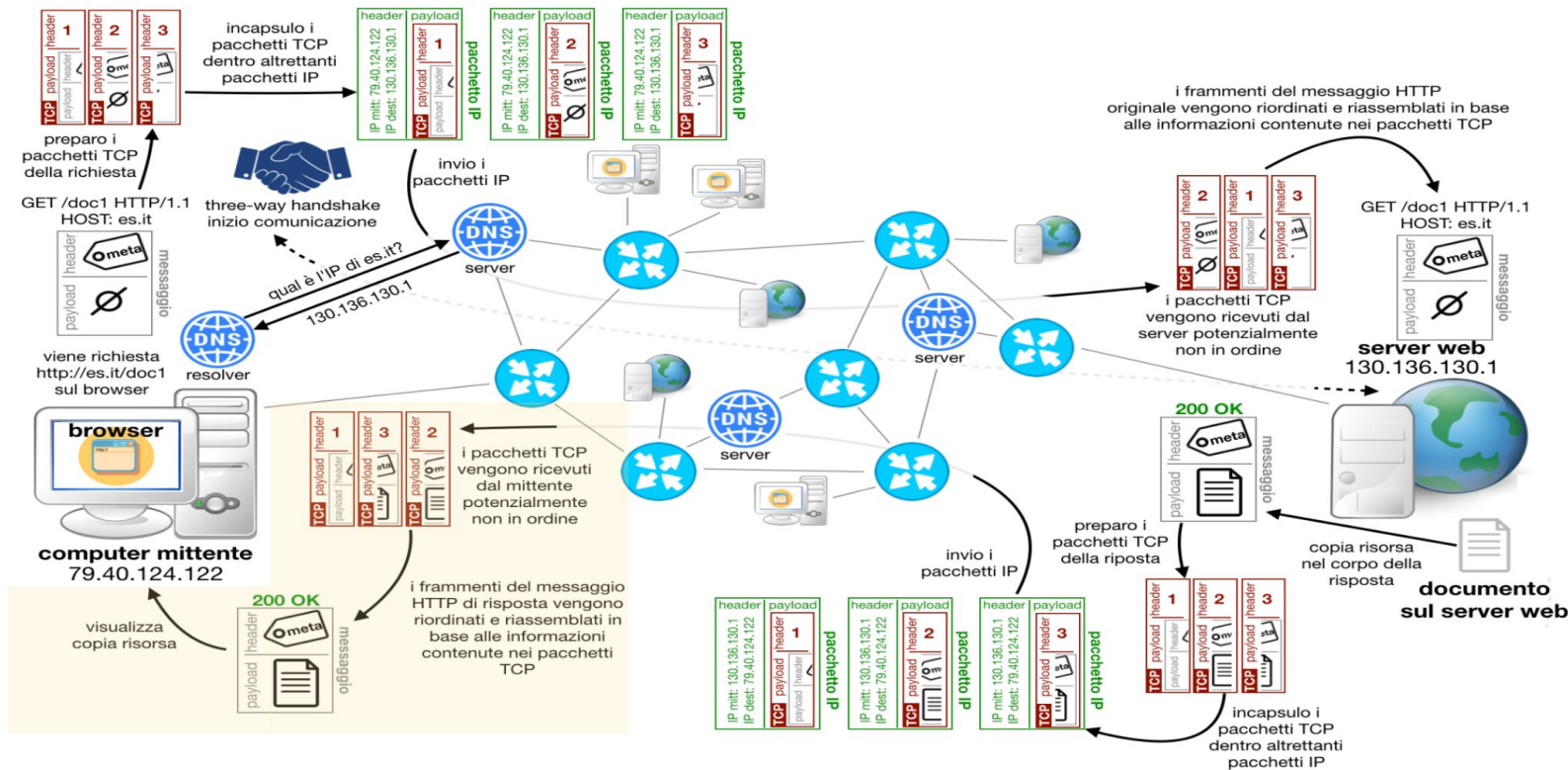
Riassunto comunicazione client - web server



Riassunto comunicazione client - web server



Riassunto comunicazione client - web server



Riassunto comunicazione client - web server

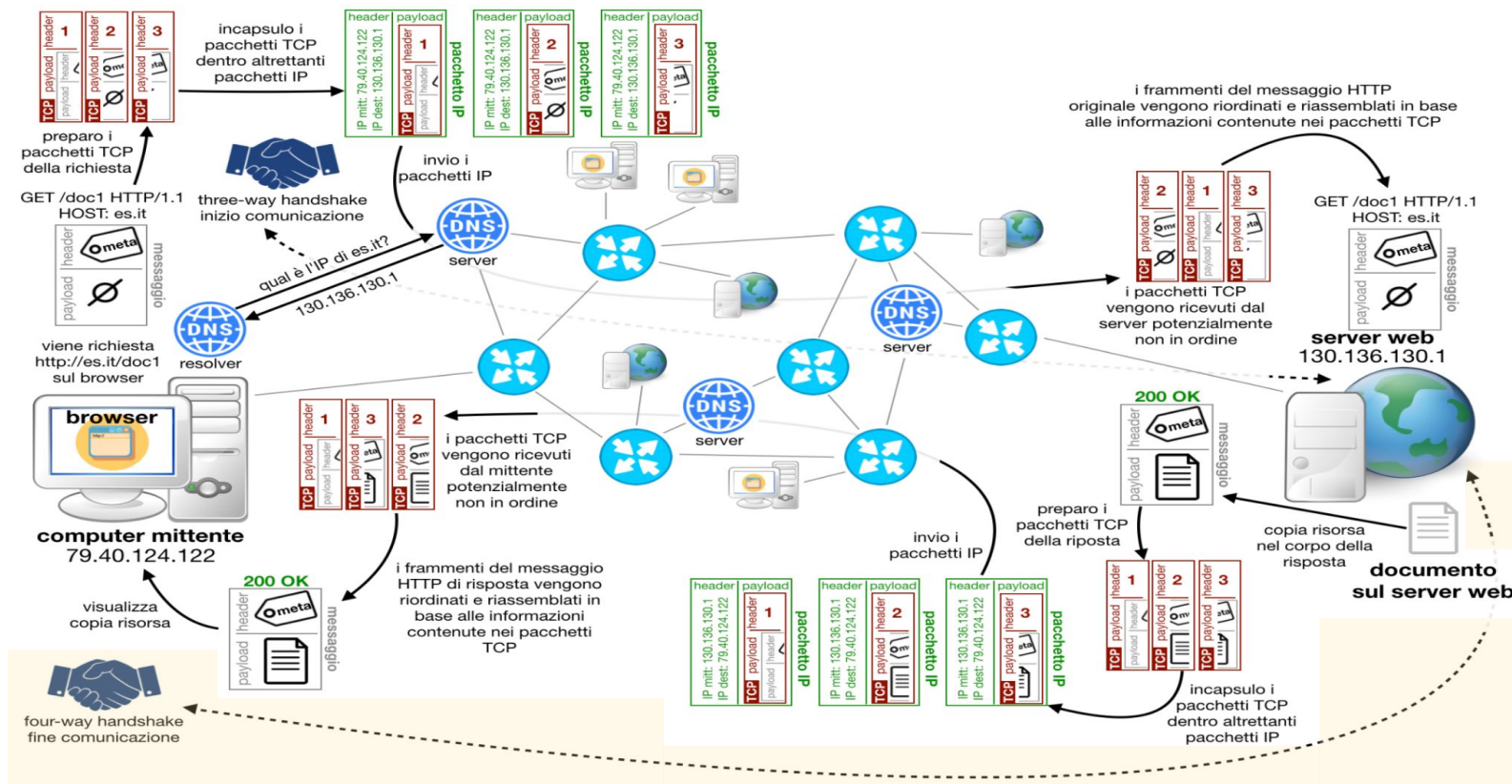
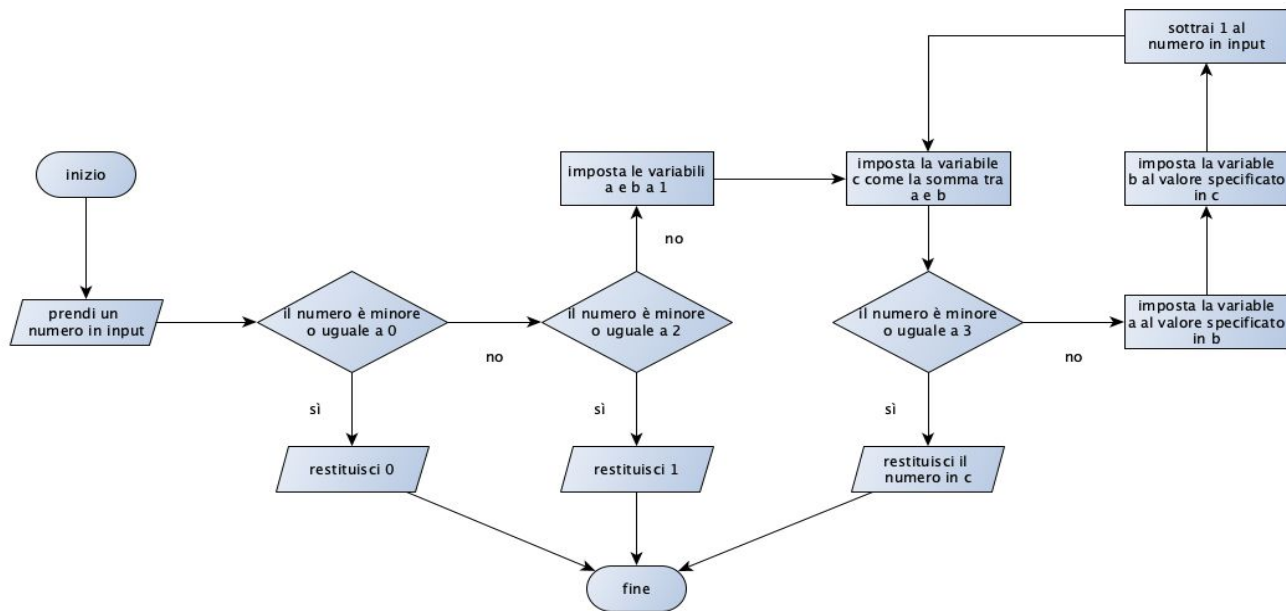


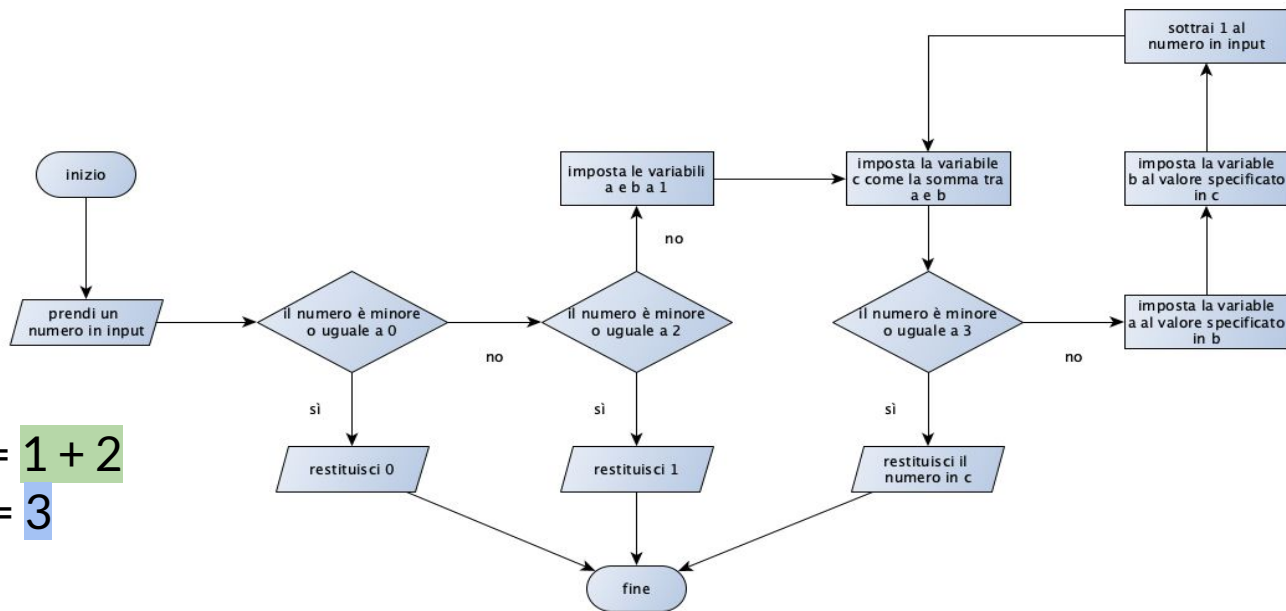
Diagramma di flusso di fib(n)



$n =$	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	...
fib(n) =	0	1	1	2	3	5	8	13	21	34	55	89	144	233	377	...

Diagramma di flusso di fib(n)

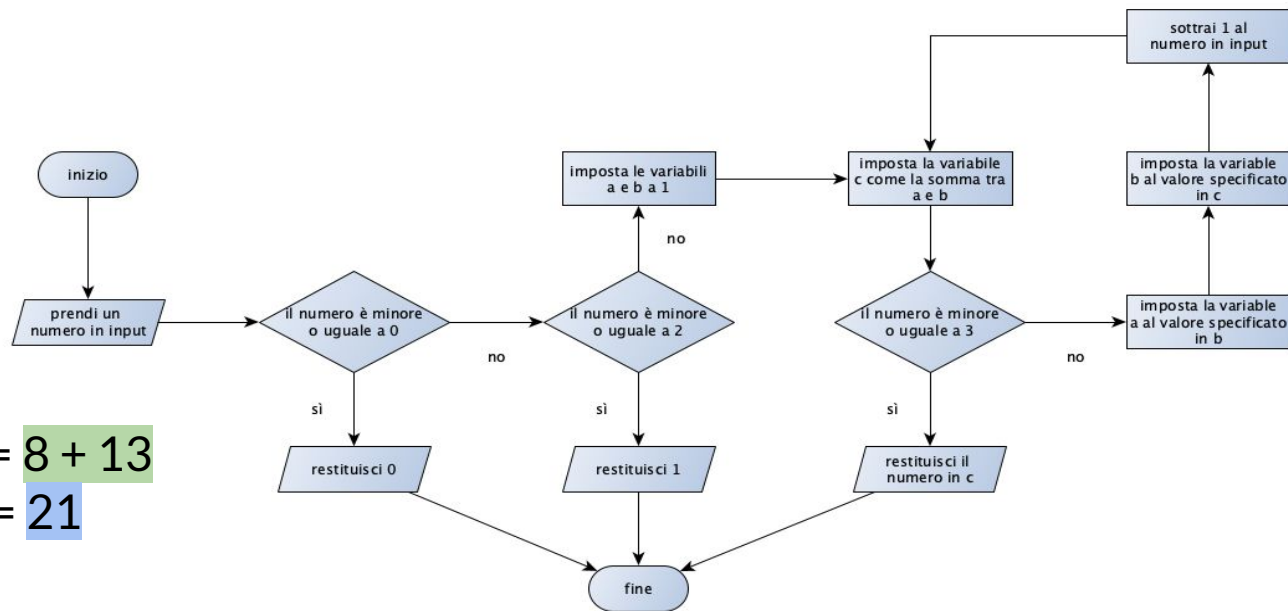
$$\text{fib}(4) = 1 + 2 \\ = 3$$



<i>n</i> =	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	...
fib(<i>n</i>) =	0	1	1	2	3	5	8	13	21	34	55	89	144	233	377	...

Diagramma di flusso di fib(n)

$$\begin{aligned}\text{fib}(8) &= 8 + 13 \\ &= 21\end{aligned}$$



<i>n</i> =	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	...
fib(<i>n</i>) =	0	1	1	2	3	5	8	13	21	34	55	89	14	23	37	...

Diagramma di flusso fib(n) per n = 6

numero = 6

a	1
b	1

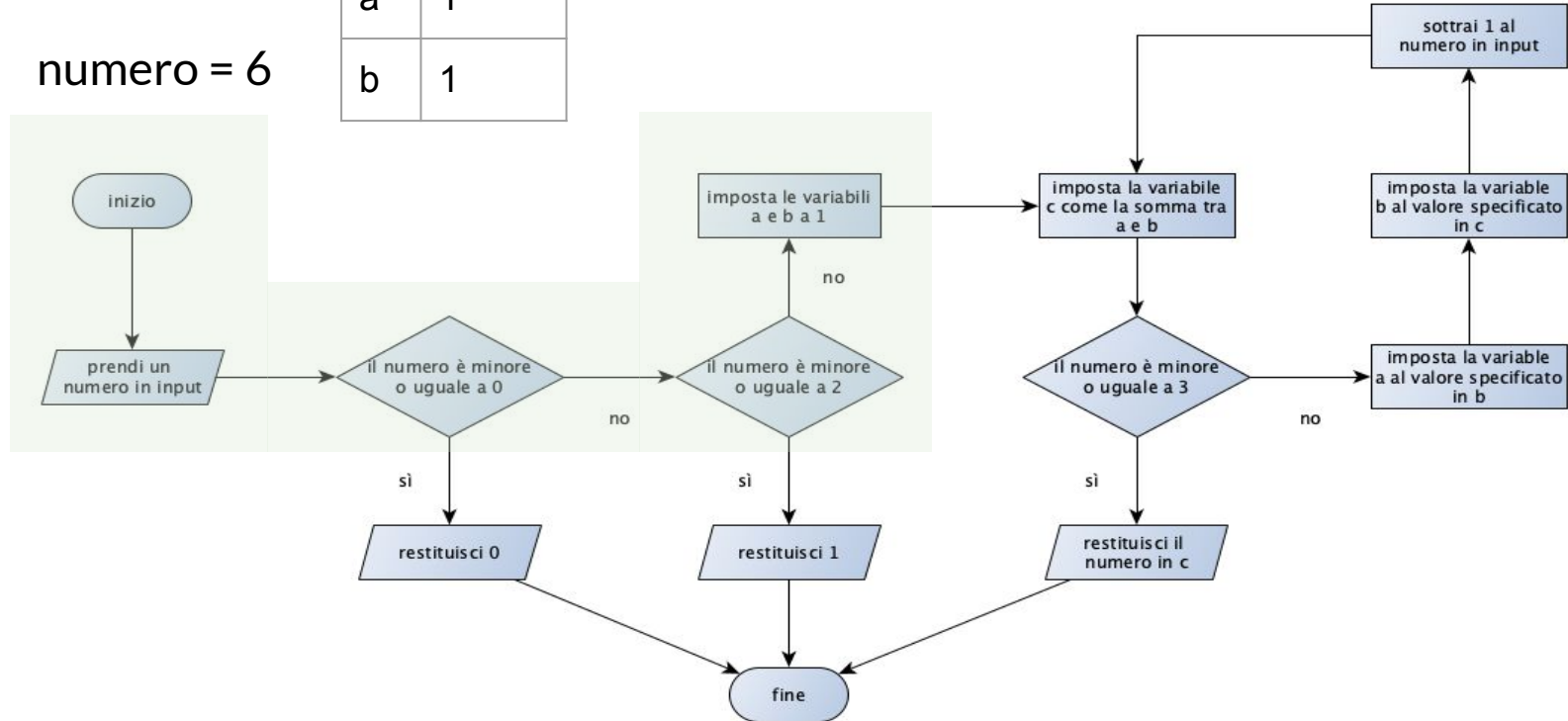


Diagramma di flusso fib(n) per n = 6

numero = 6

a	1
b	1
c	2

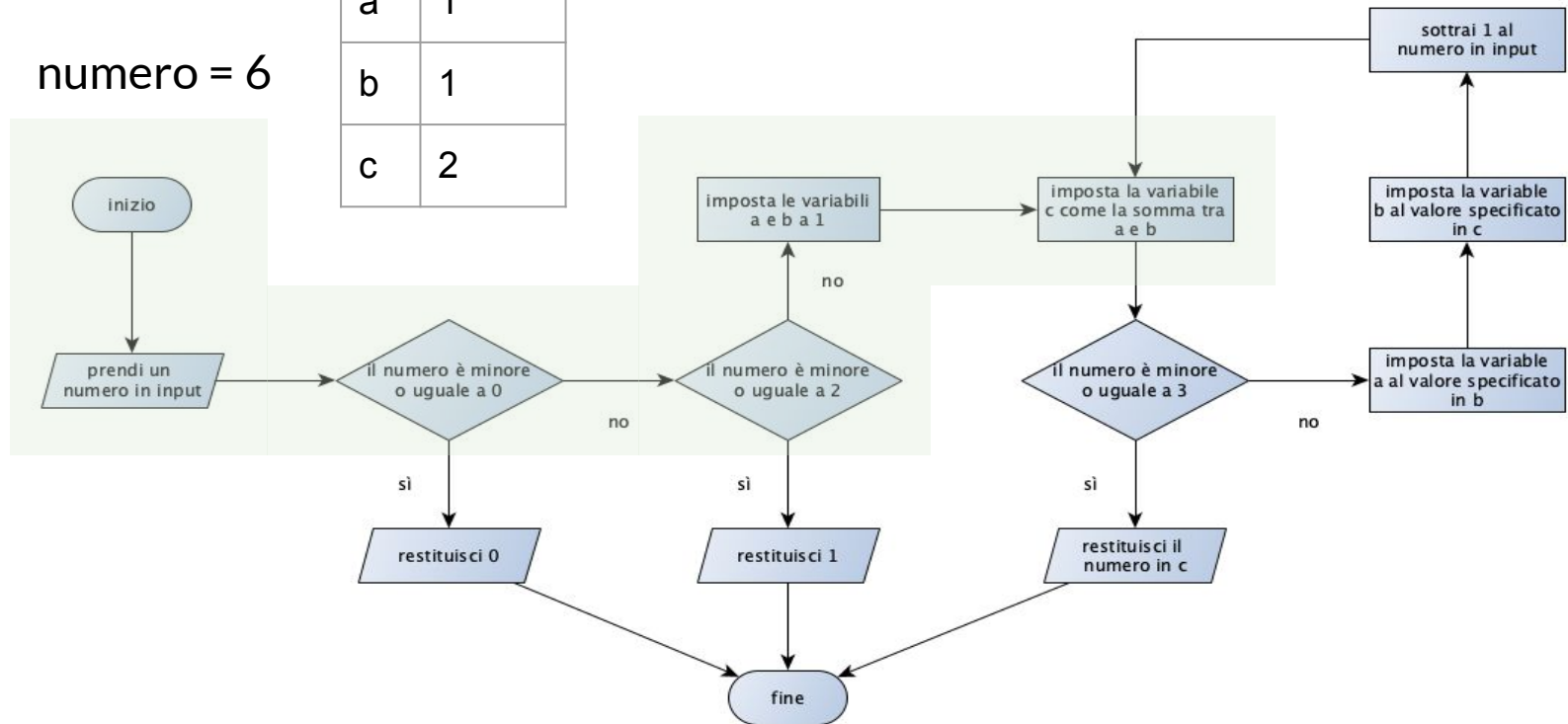


Diagramma di flusso fib(n) per n = 6

numero = 6

a	1
b	1
c	2

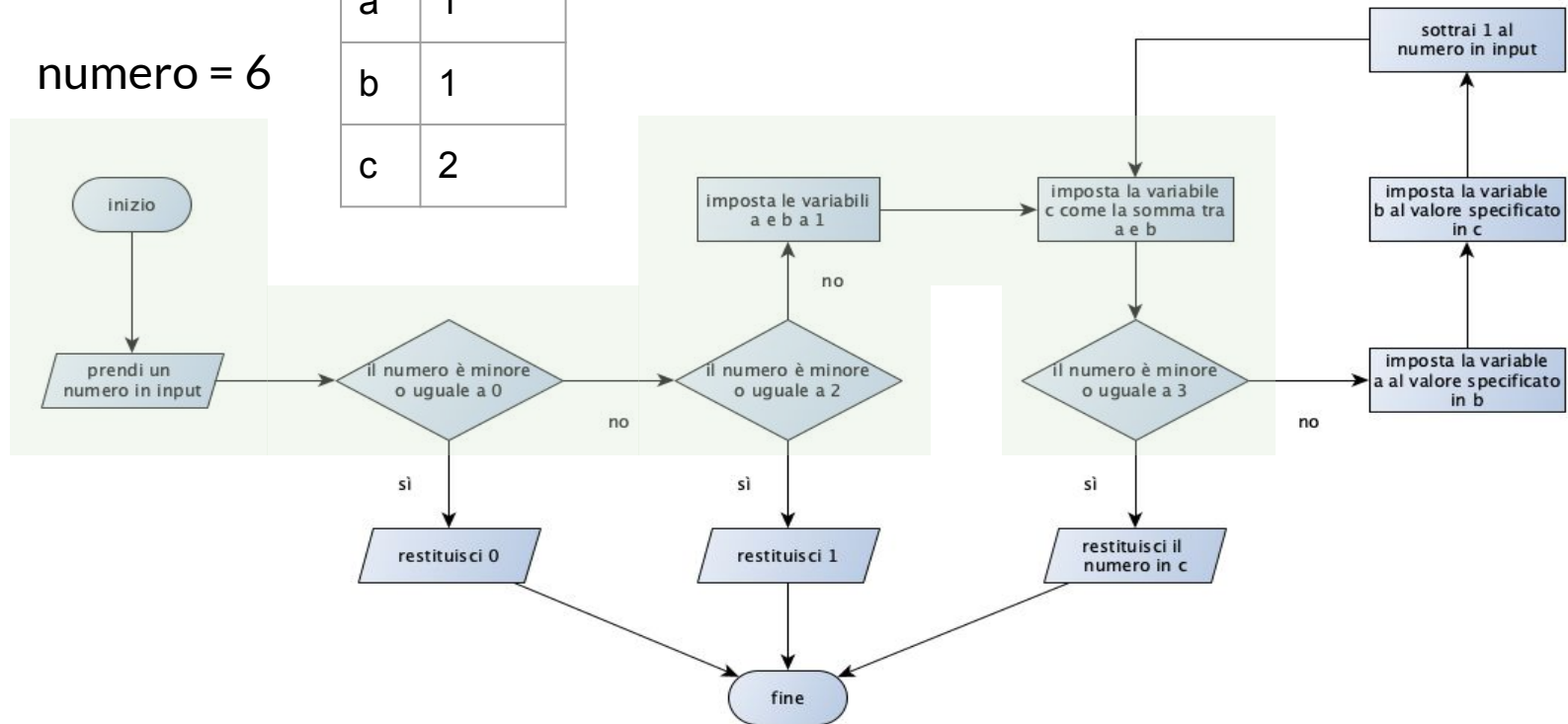


Diagramma di flusso fib(n) per n = 6

numero = 5

a	1
b	2
c	2

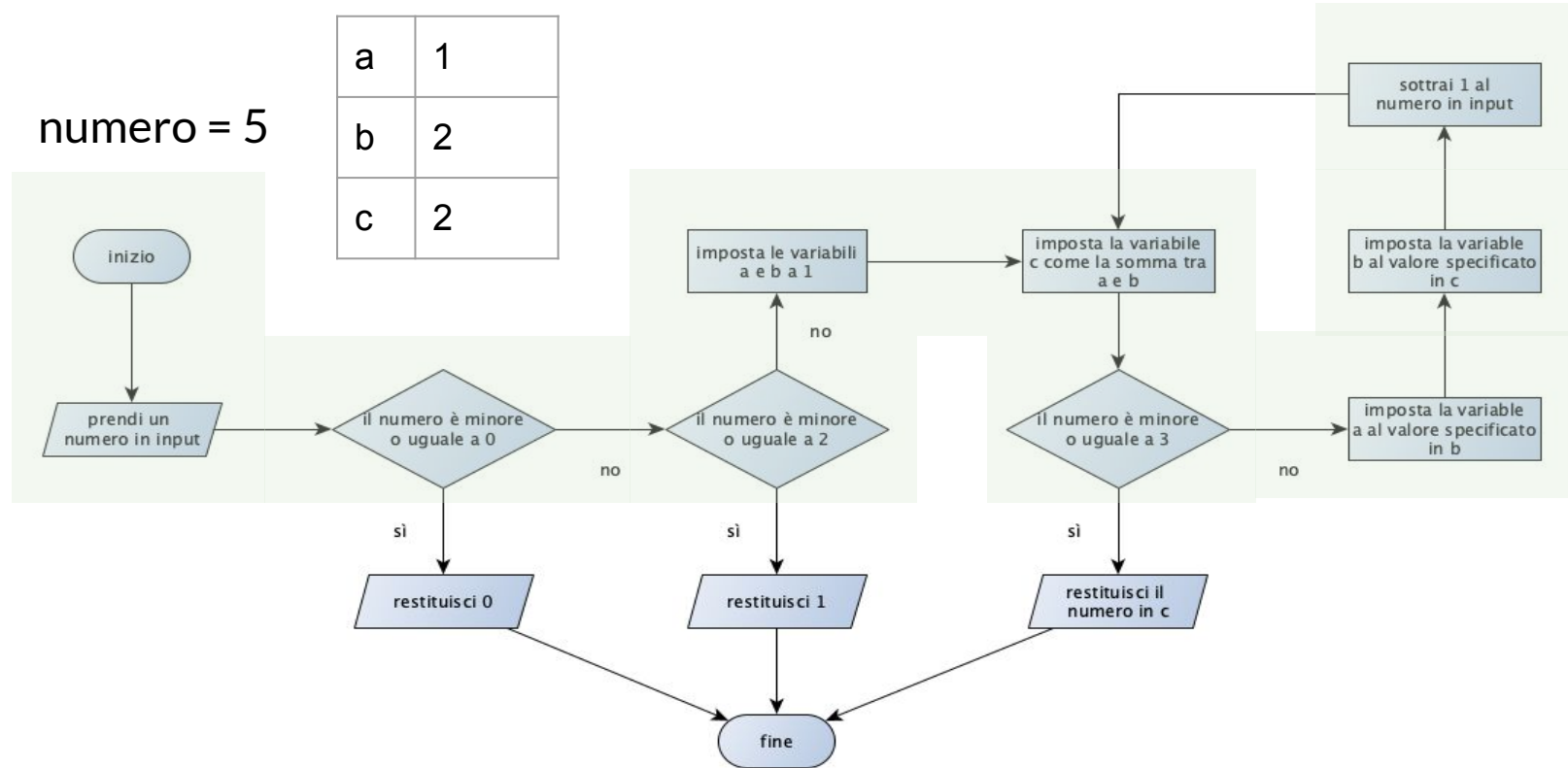


Diagramma di flusso fib(n) per n = 6

numero = 5

a	1
b	2
c	3

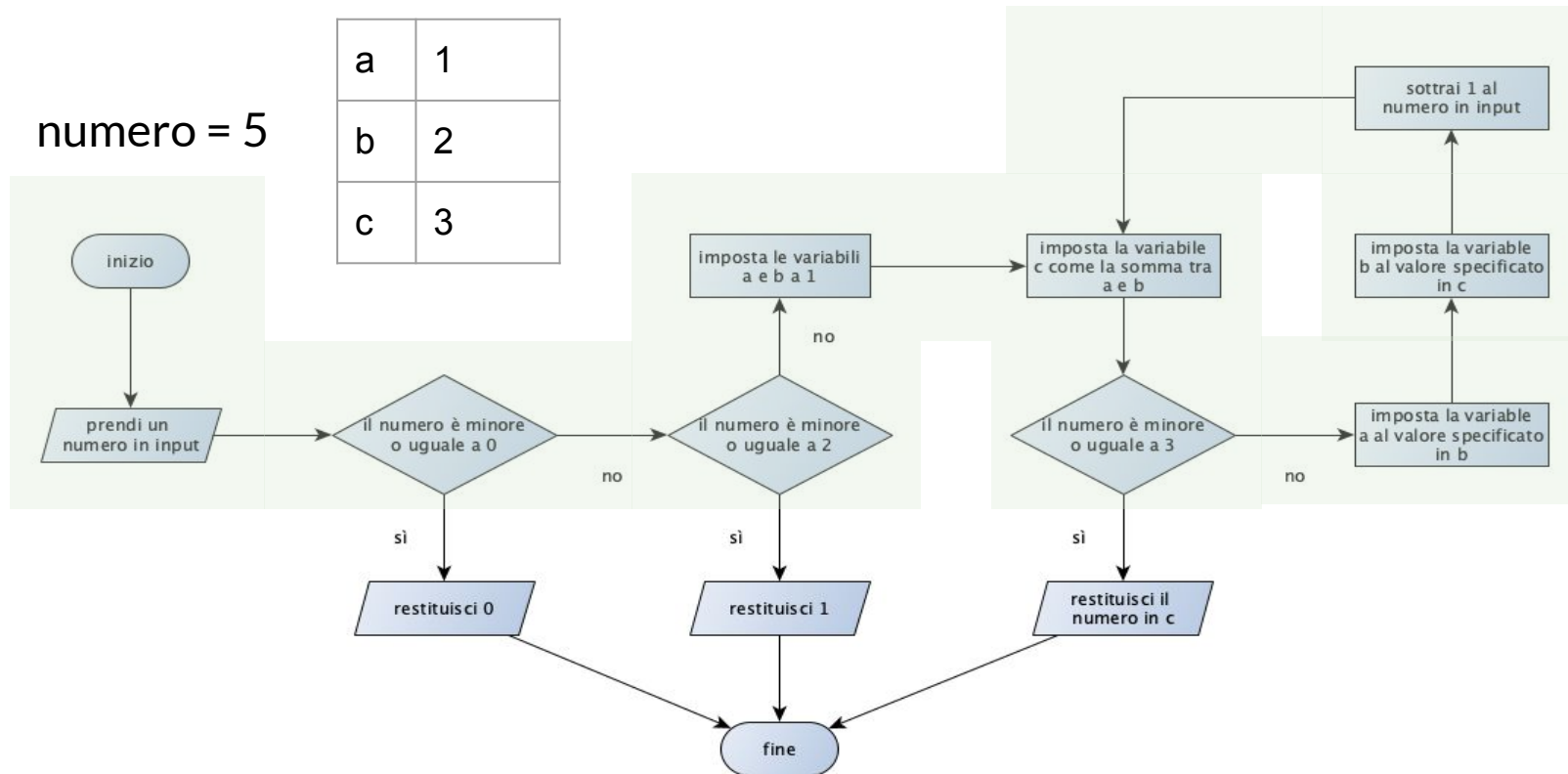


Diagramma di flusso fib(n) per n = 6

numero = 4

a	2
b	3
c	5

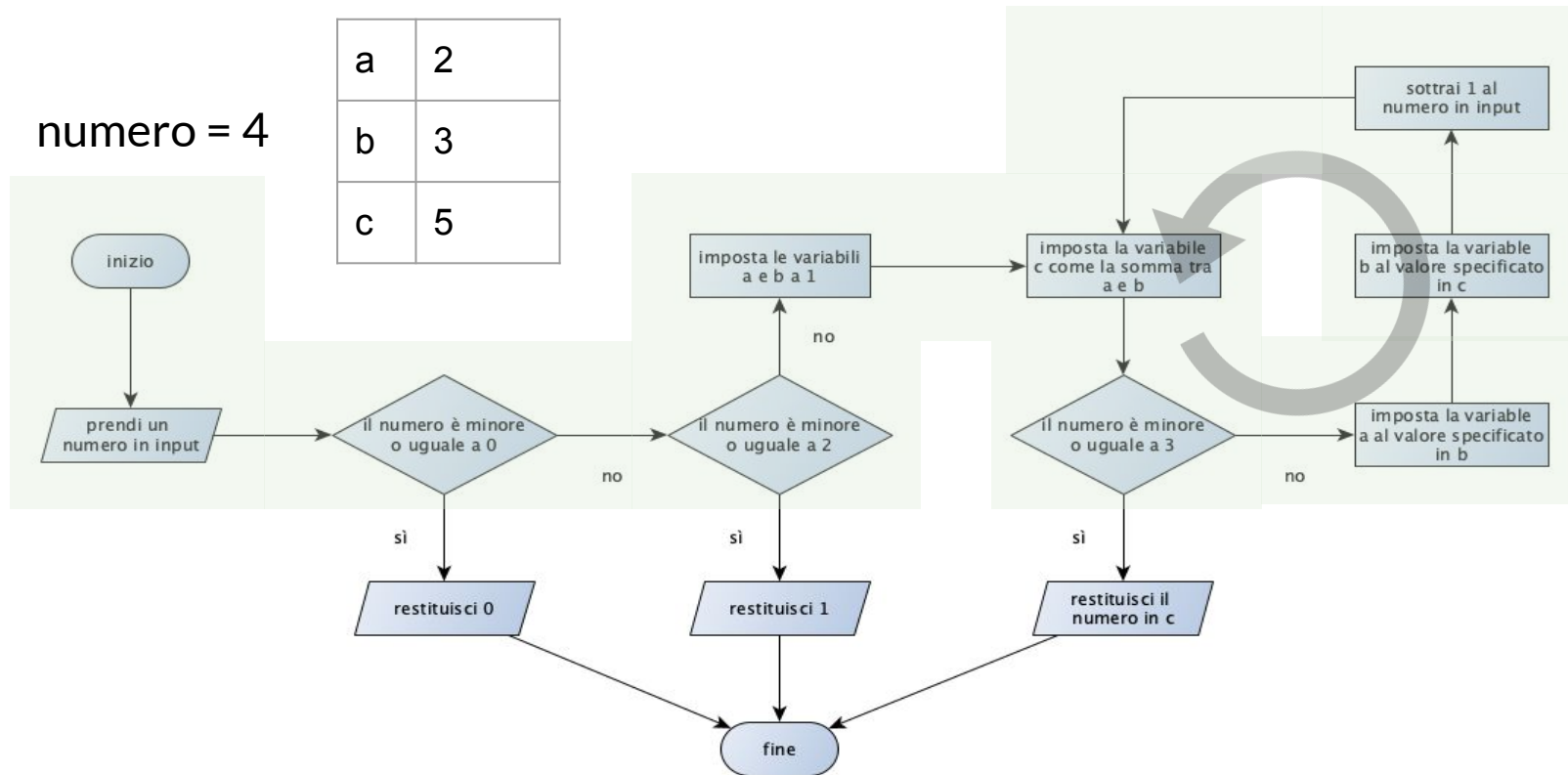


Diagramma di flusso fib(n) per n = 6

numero = 3

a	3
b	5
c	8

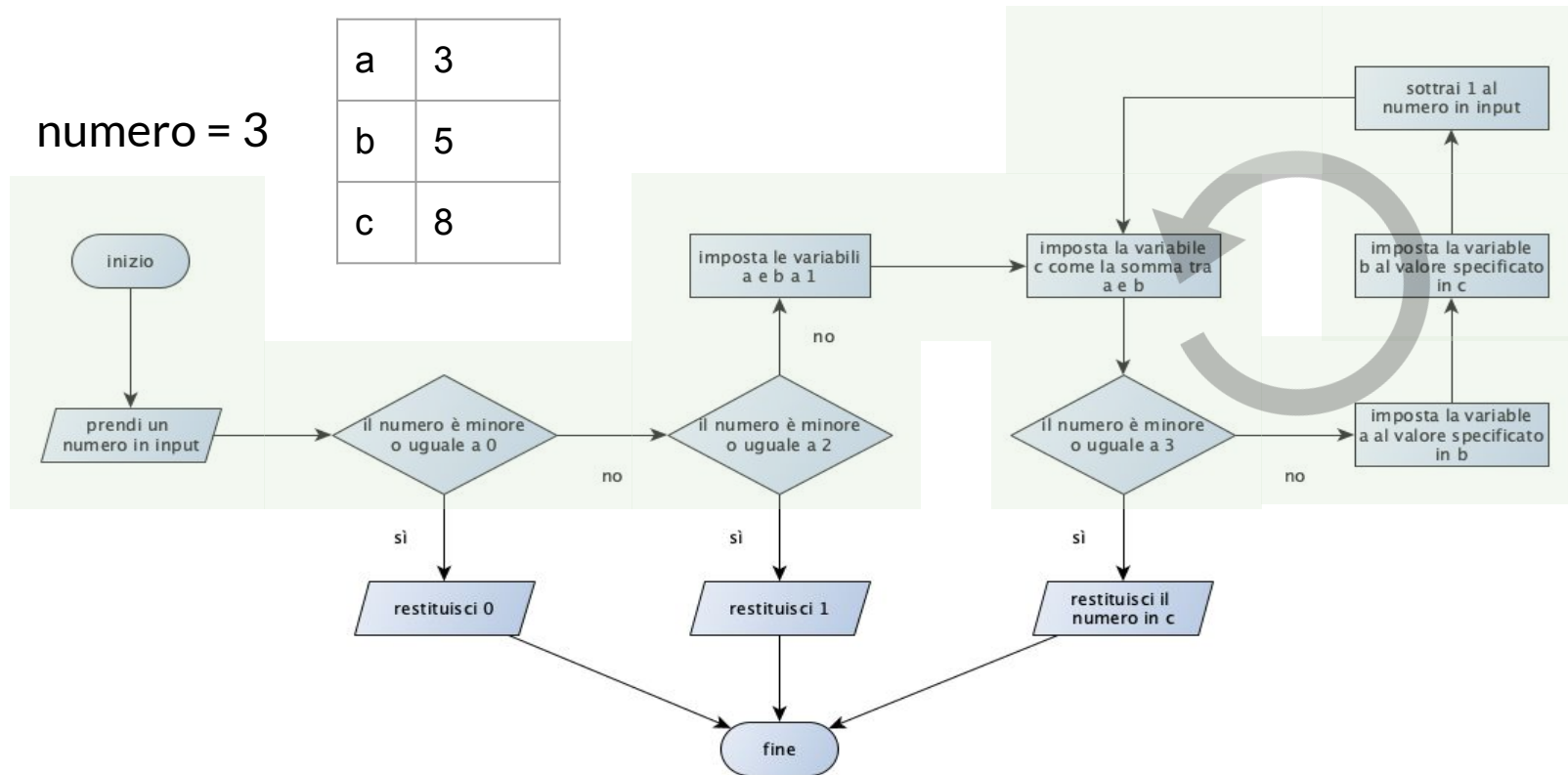


Diagramma di flusso fib(n) per n = 6

numero = 3

a	3
b	5
c	8

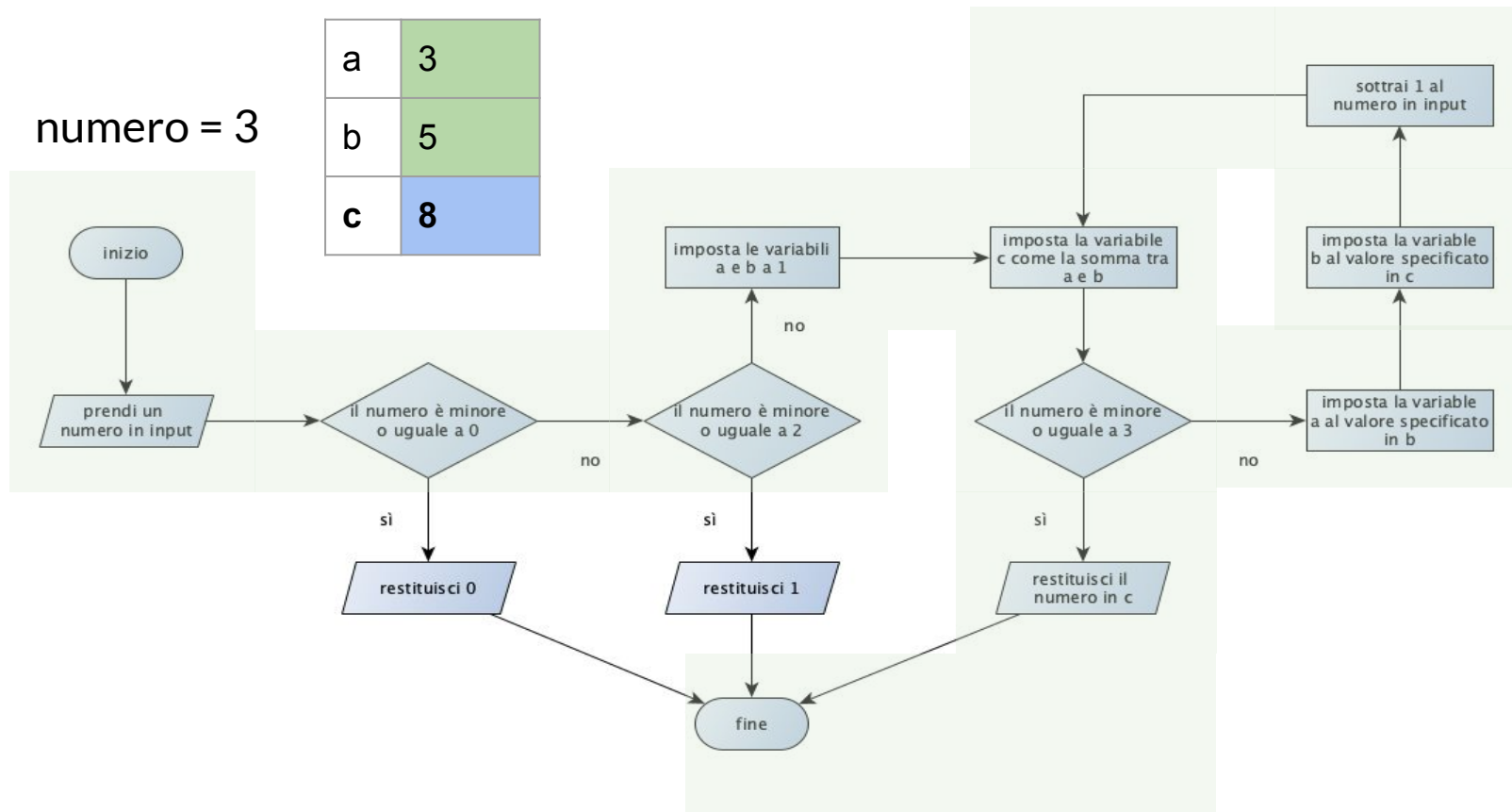


Diagramma di flusso di fib(n) – Python

```
def fib(n):  
    if n <= 0:  
        return 0  
    elif n <= 2:  
        return 1  
    else:  
        a = 1  
        b = 1  
        while True:  
            c = a + b  
            if n <= 3:  
                return c  
            a = b  
            b = c  
            n = n - 1
```

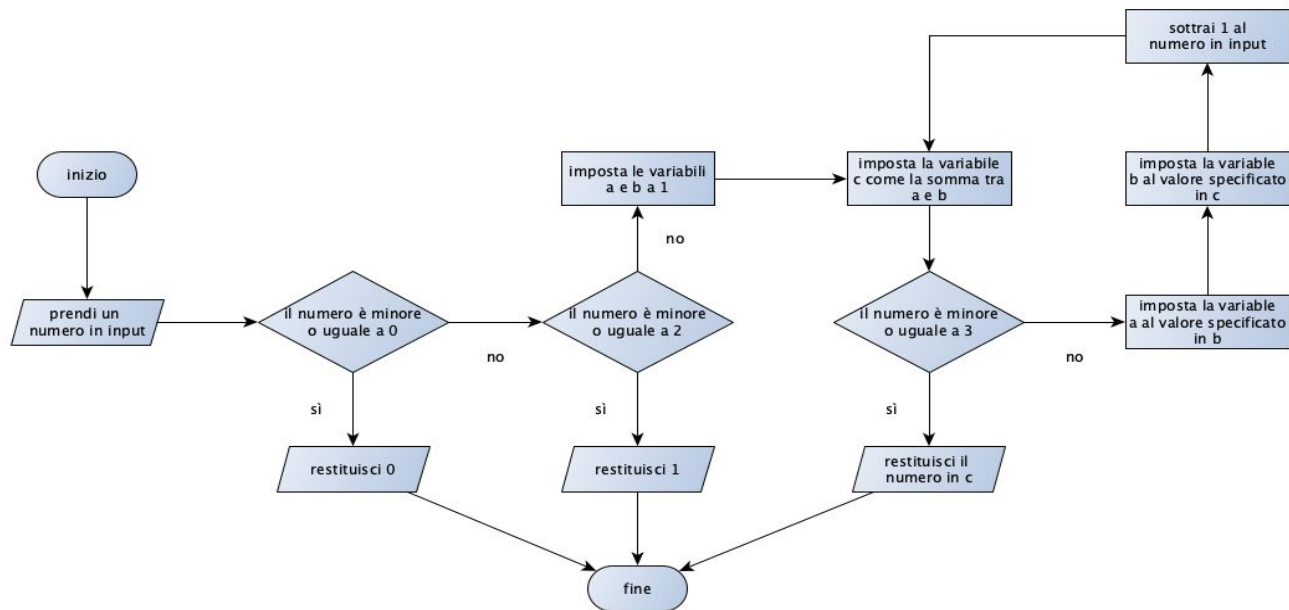


Diagramma di flusso – esercizio

N	15
K	4

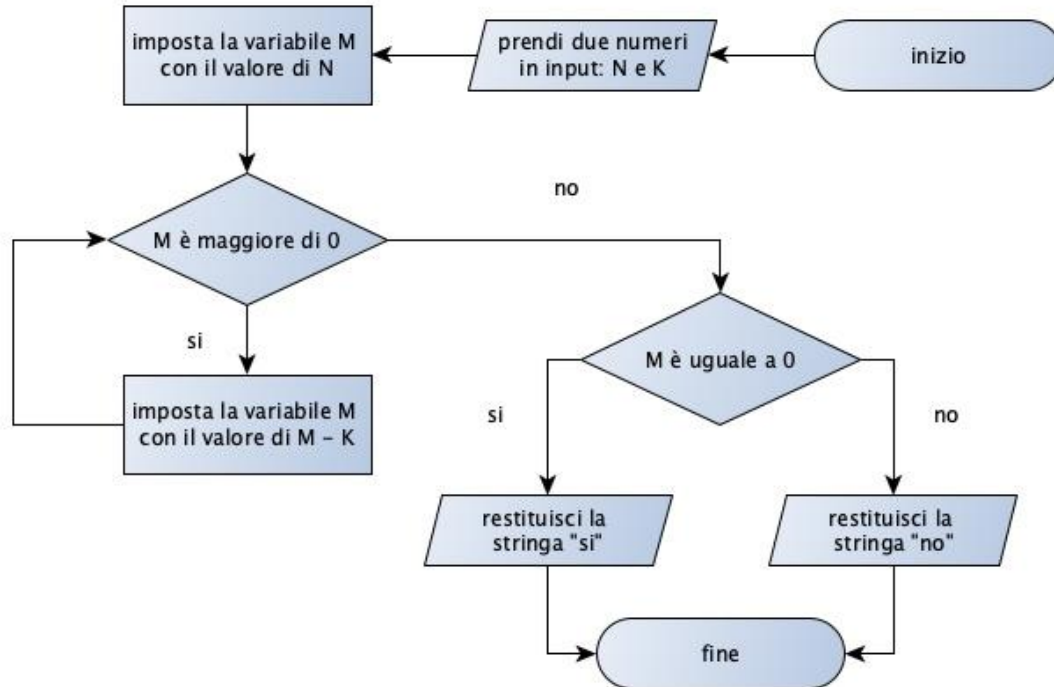
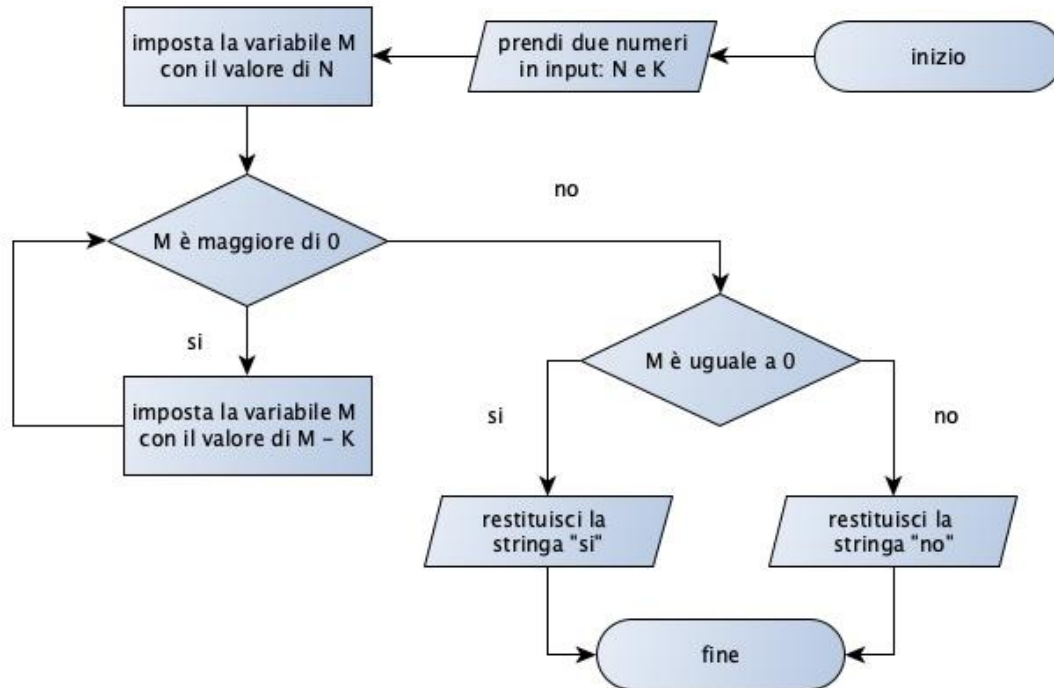


Diagramma di flusso – esercizio

N	15
K	4
M	-1



no

Sistema numerico binario

BYTE							
2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
128	64	32	16	8	4	2	1

208							
1	1	0	1	0	0	0	0
1×2^7	1×2^6	0×2^5	1×2^4	0×2^3	0×2^2	0×2^1	0×2^0
128	64	32	16	8	4	2	1
$128 + 64 + 16 = 208$							

Sistema numerico binario

154							
1	0	0	1	1	0	1	0
1×2^7	0×2^6	0×2^5	1×2^4	1×2^3	0×2^2	1×2^1	0×2^0
128	64	32	16	8	4	2	1
$128 + 16 + 8 + 2 = 154$							

Sistema numerico binario

80							
?	?	?	?	?	?	?	?
$? \times 2^7$	$? \times 2^6$	$? \times 2^5$	$? \times 2^4$	$? \times 2^3$	$? \times 2^2$	$? \times 2^1$	$? \times 2^0$
128	64	32	16	8	4	2	1

Sistema numerico binario

80							
0	1	0	1	0	0	0	0
0×2^7	1×2^6	0×2^5	1×2^4	0×2^3	0×2^2	0×2^1	0×2^0
128	64	32	16	8	4	2	1
$64 + 16 = 80$							
