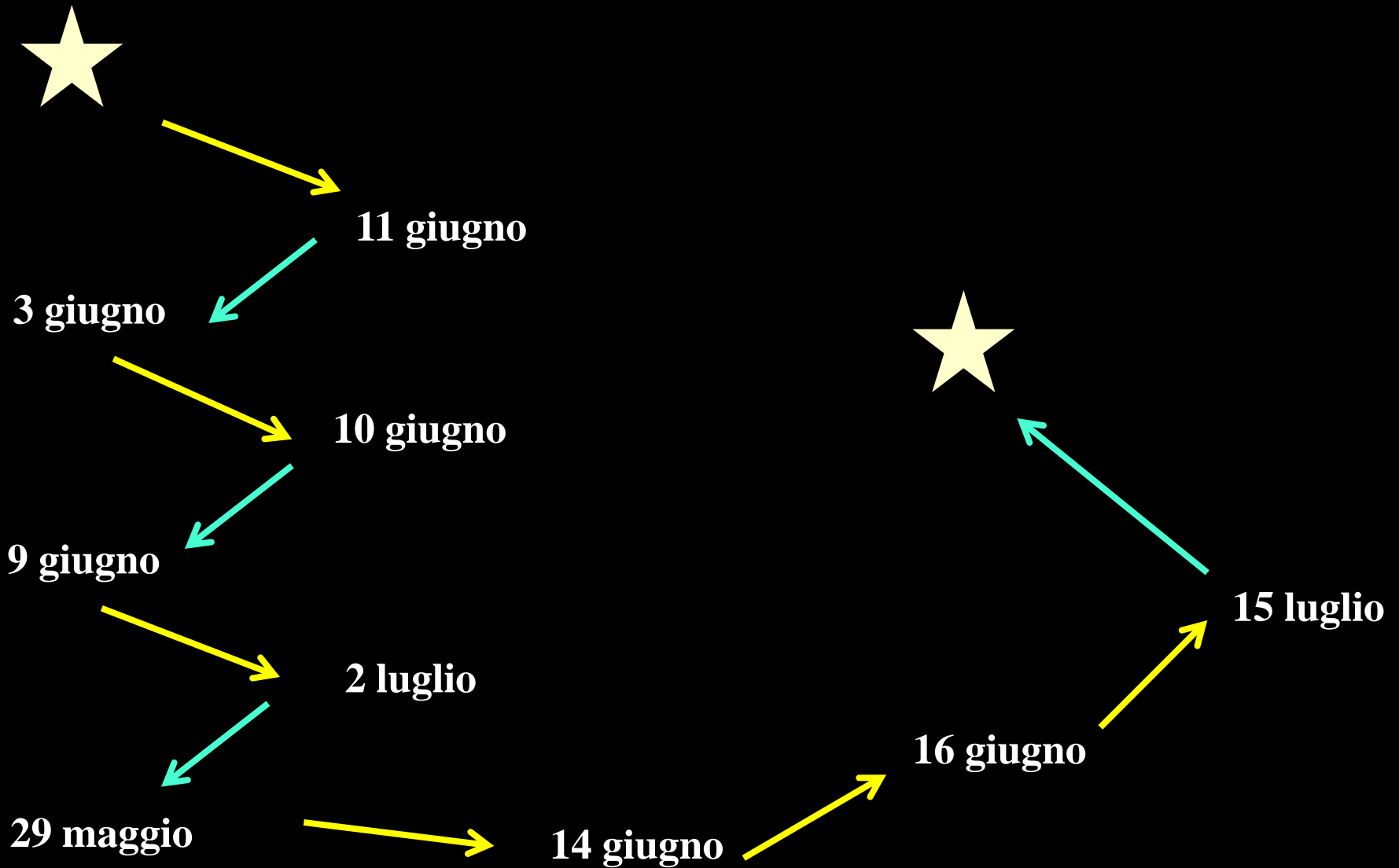


Metti, una serie a cena

una storia caotica ?

Tullia Norando
Dipartimento di Matematica
Politecnico di Milano

Un puzzle di date

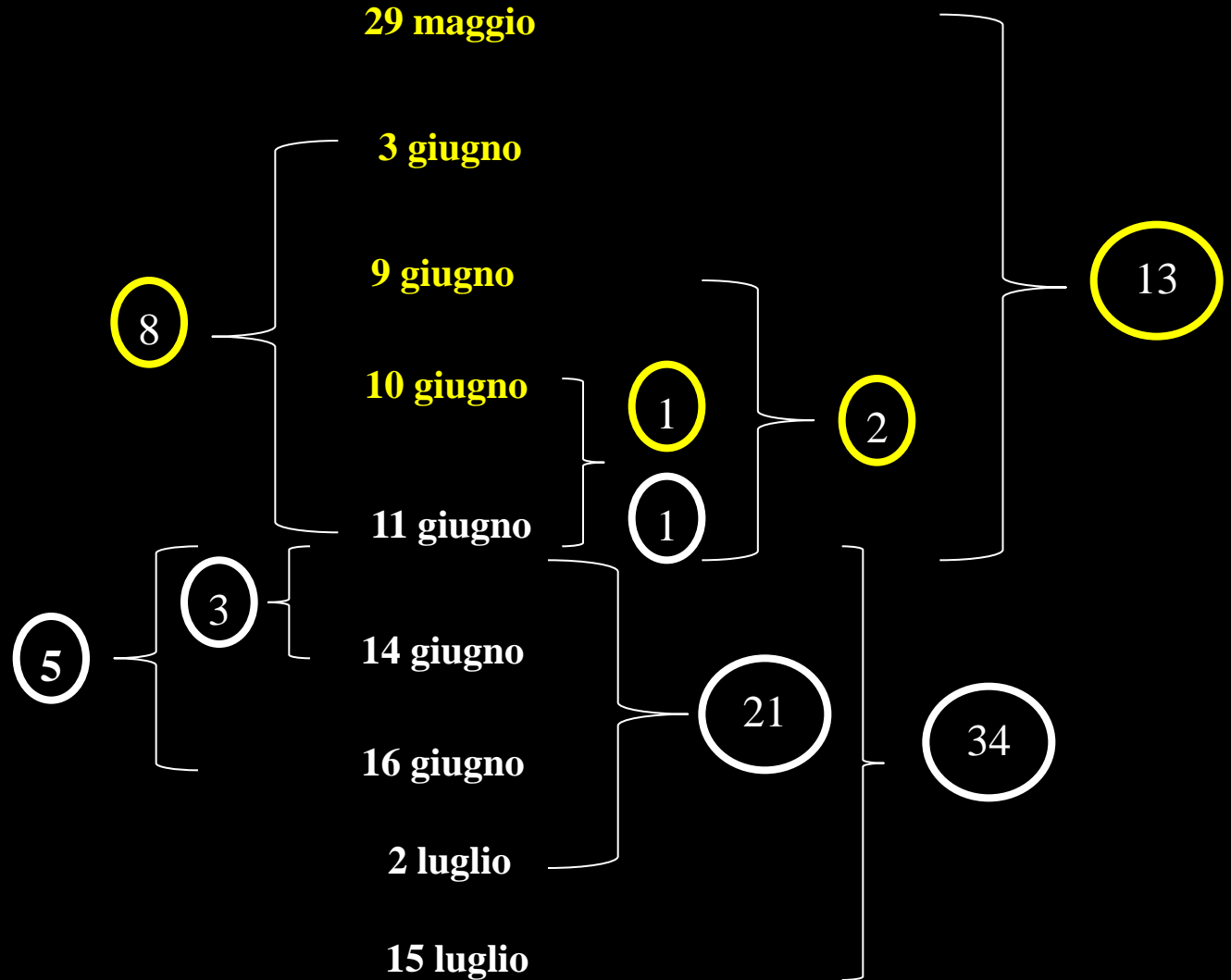
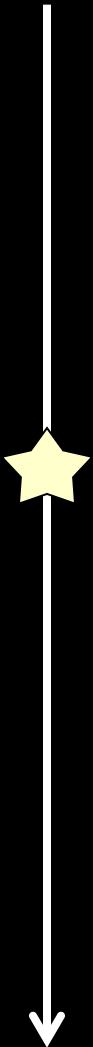


Facciamo ordine nel tempo

a
s
s
e

d
e
l

t
e
m
p
o

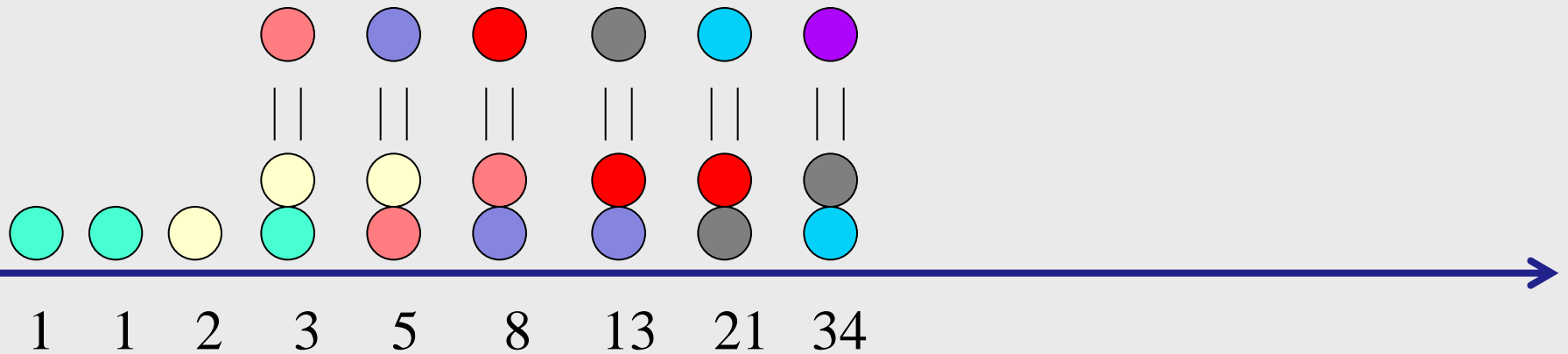


Misura degli intervalli temporali

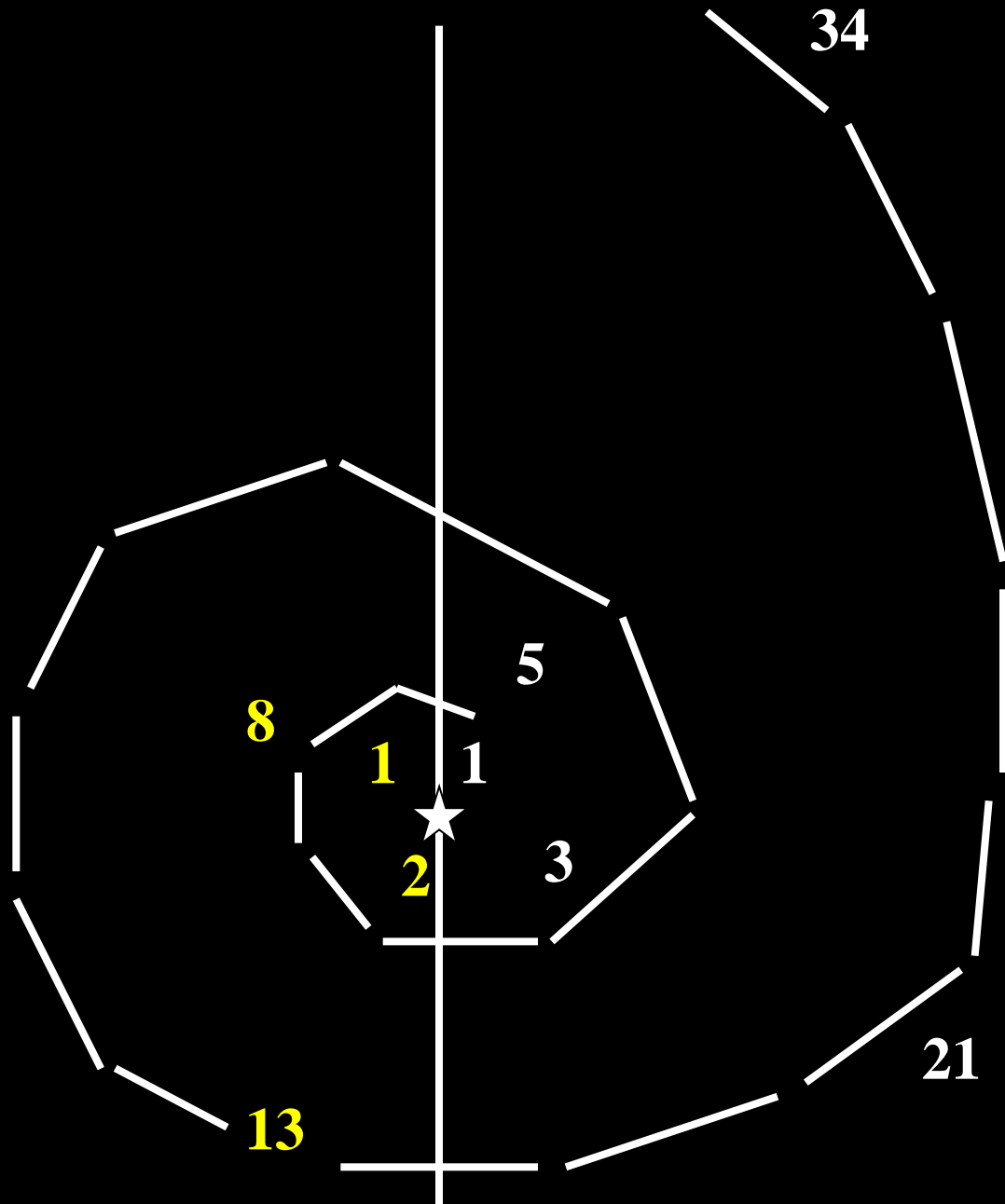
$$x_1 = 1$$

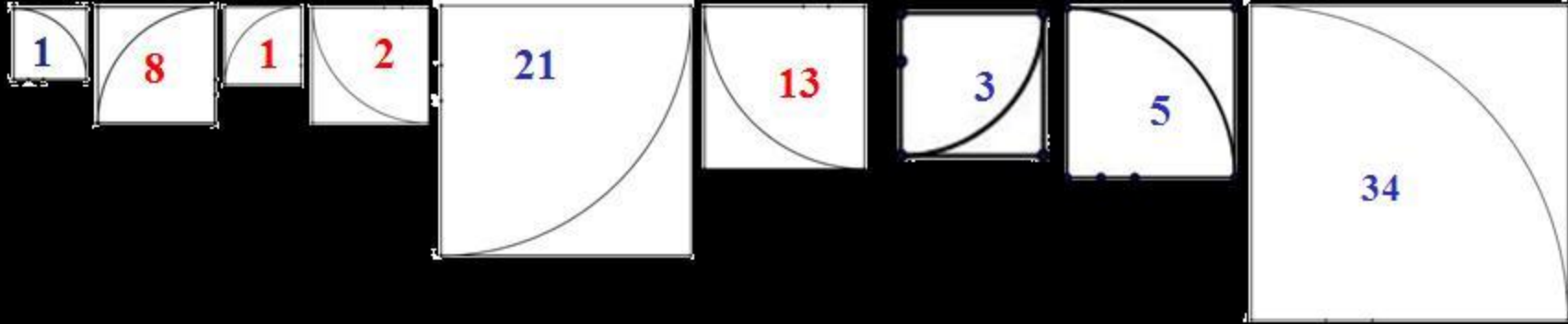
$$x_2 = 1$$

$$x_{n+1} = x_n + x_{n-1}$$

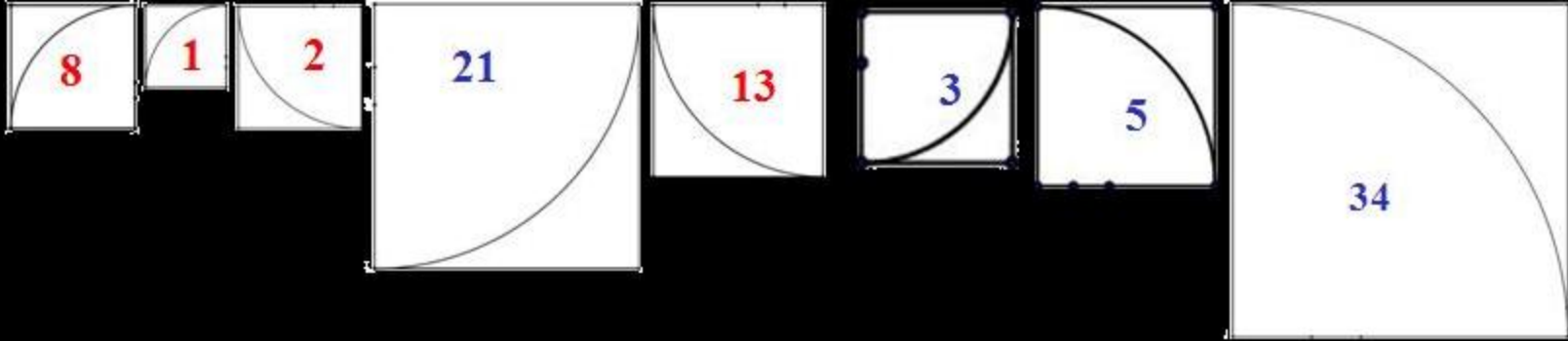


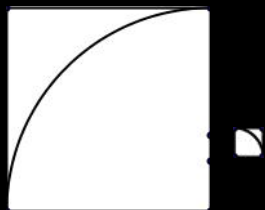
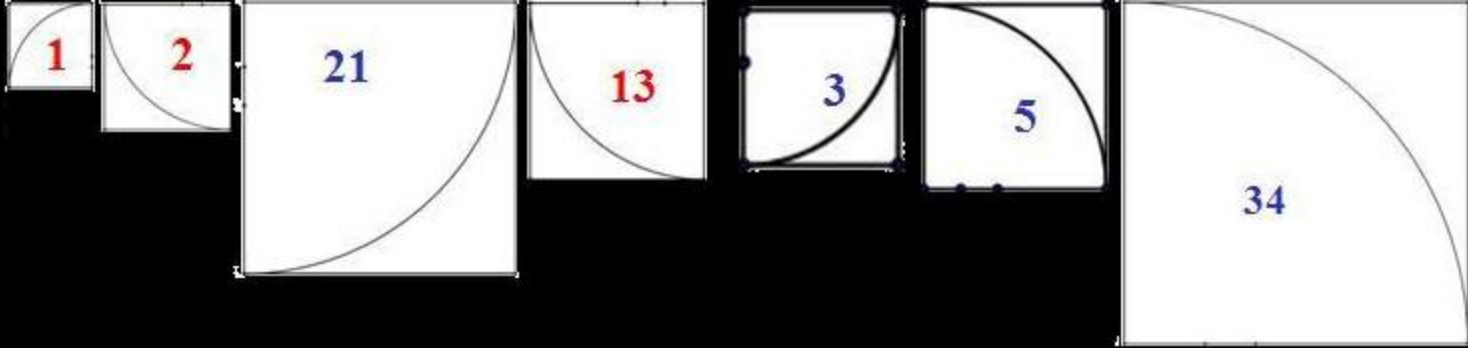
Ordine nello spazio - tempo

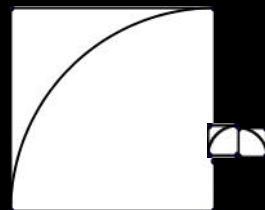
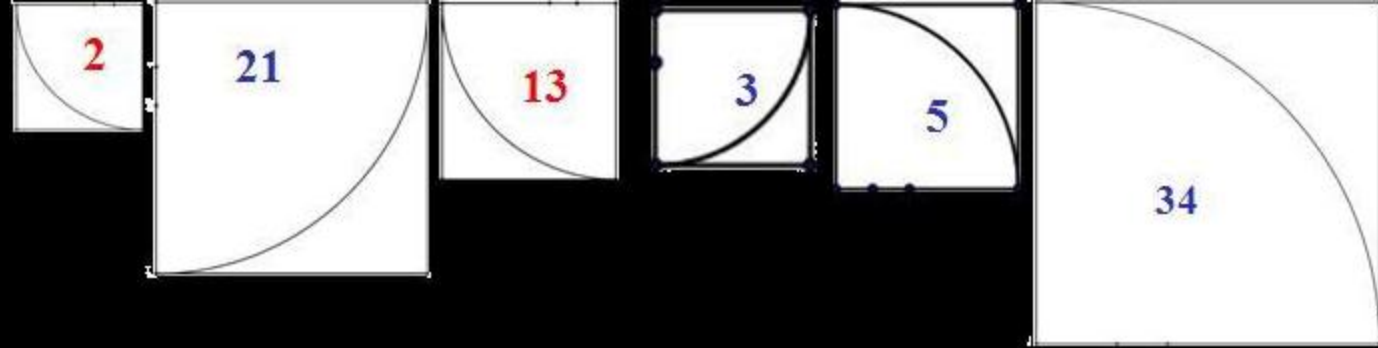


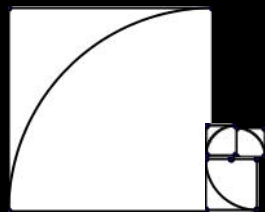
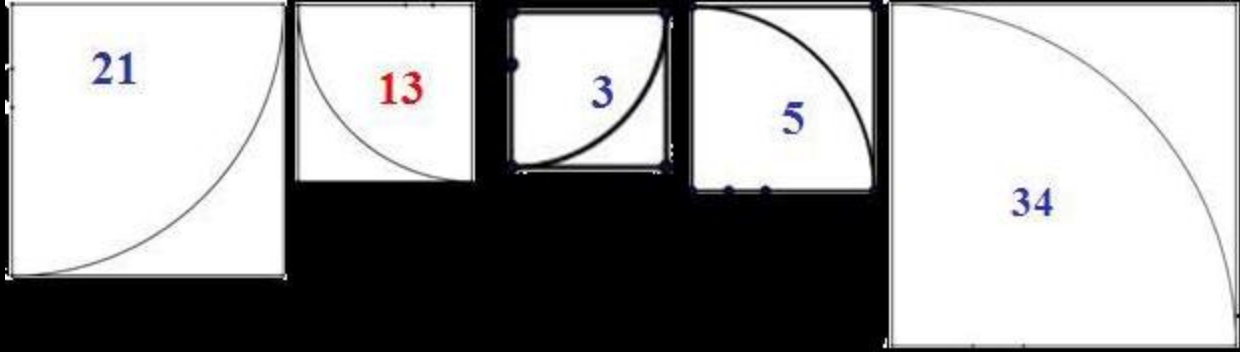


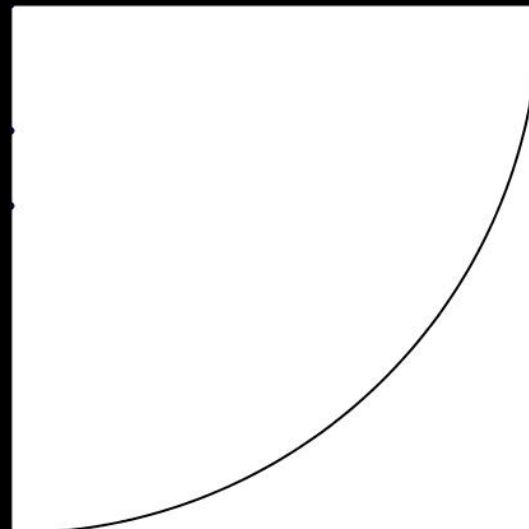
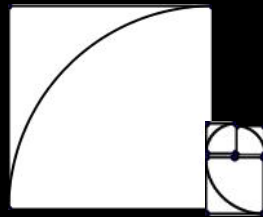
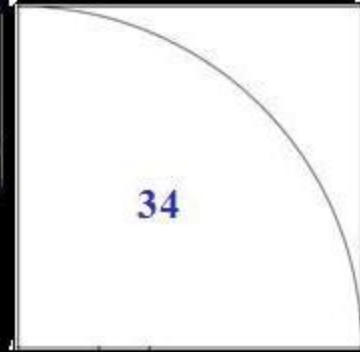
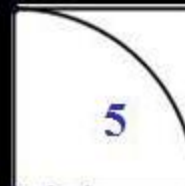
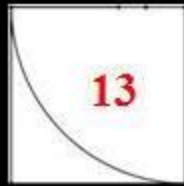
Un puzzle da risolvere

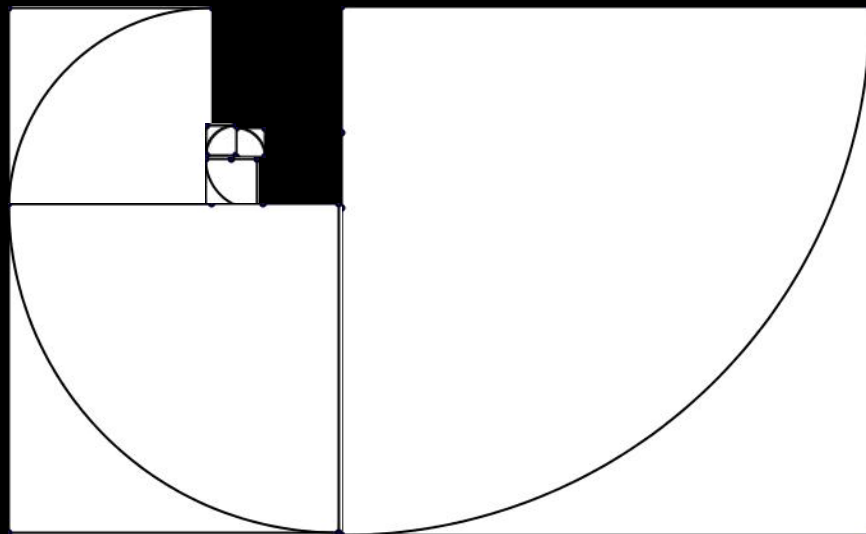
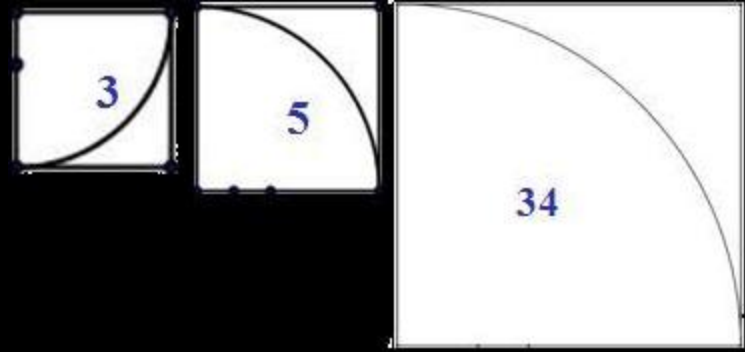


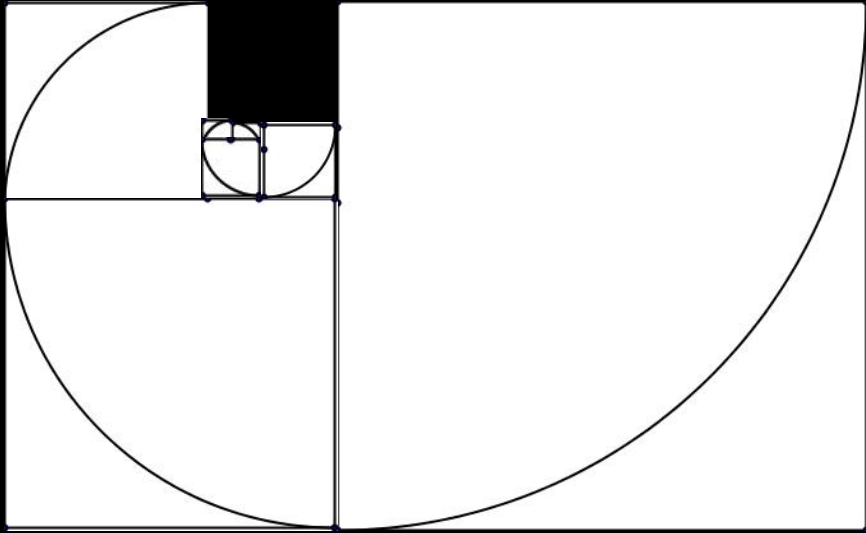
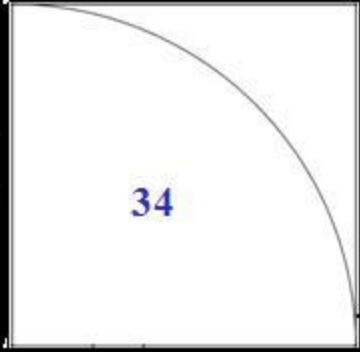
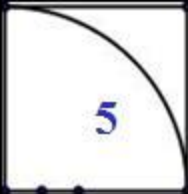


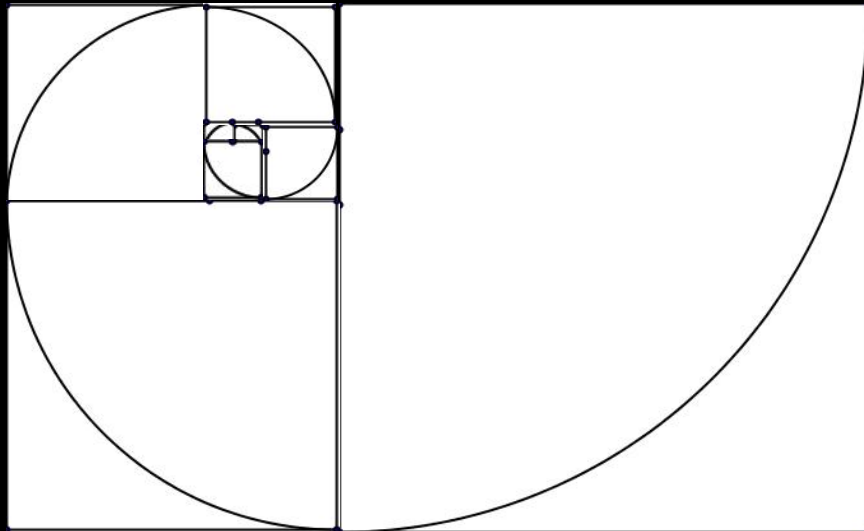


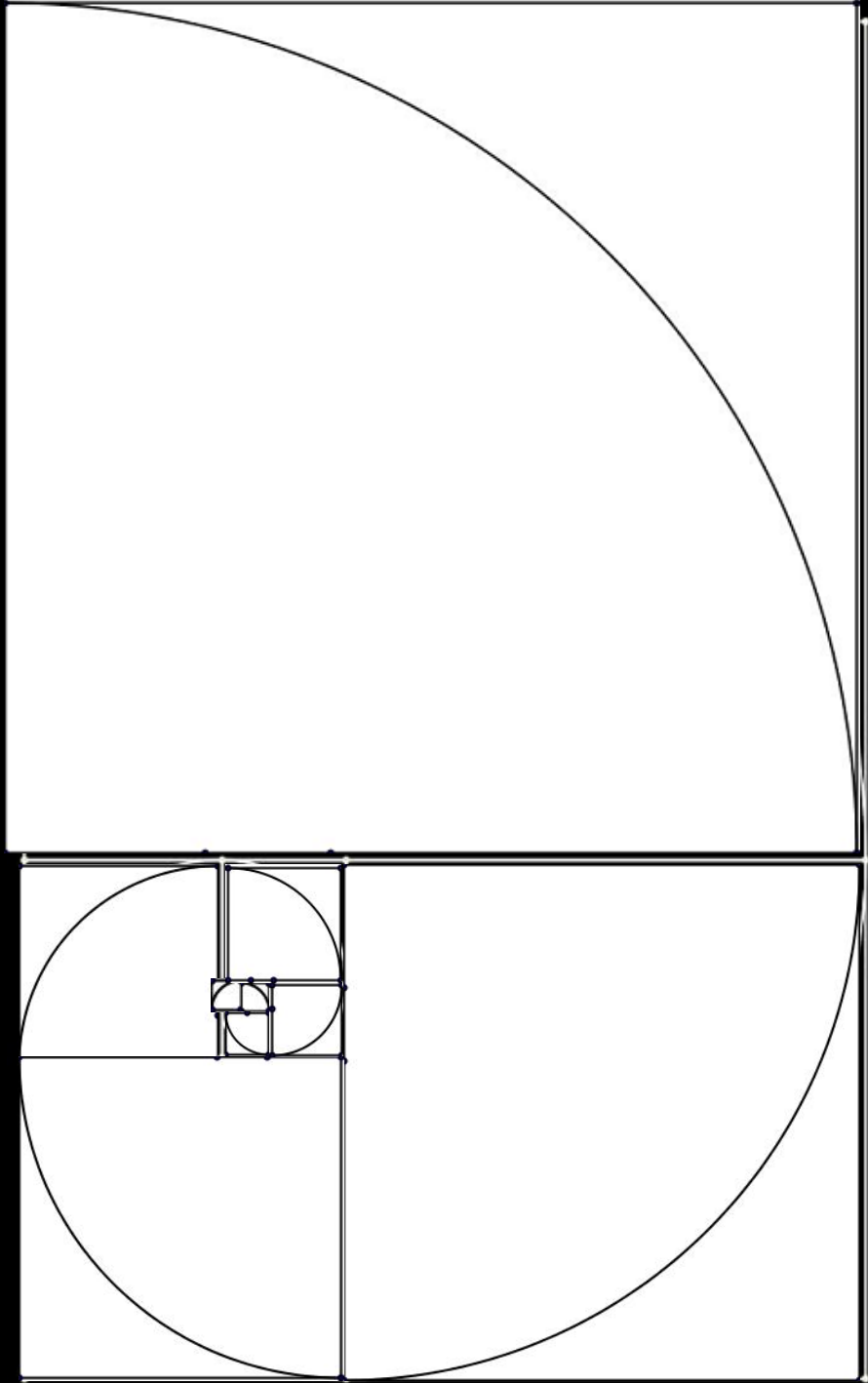




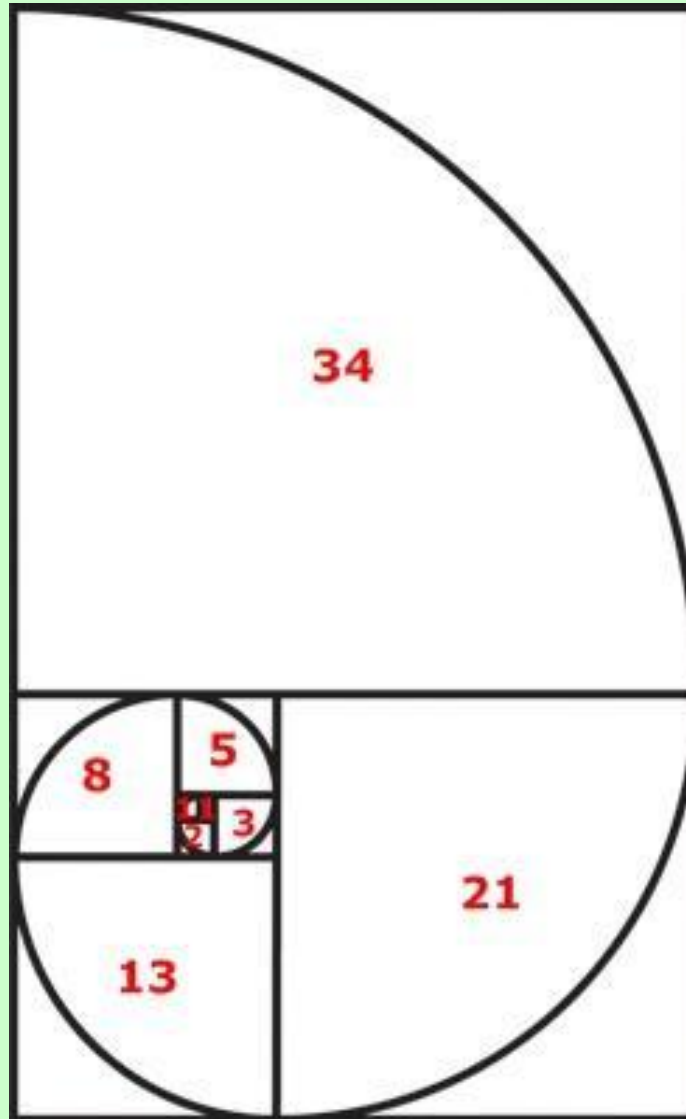








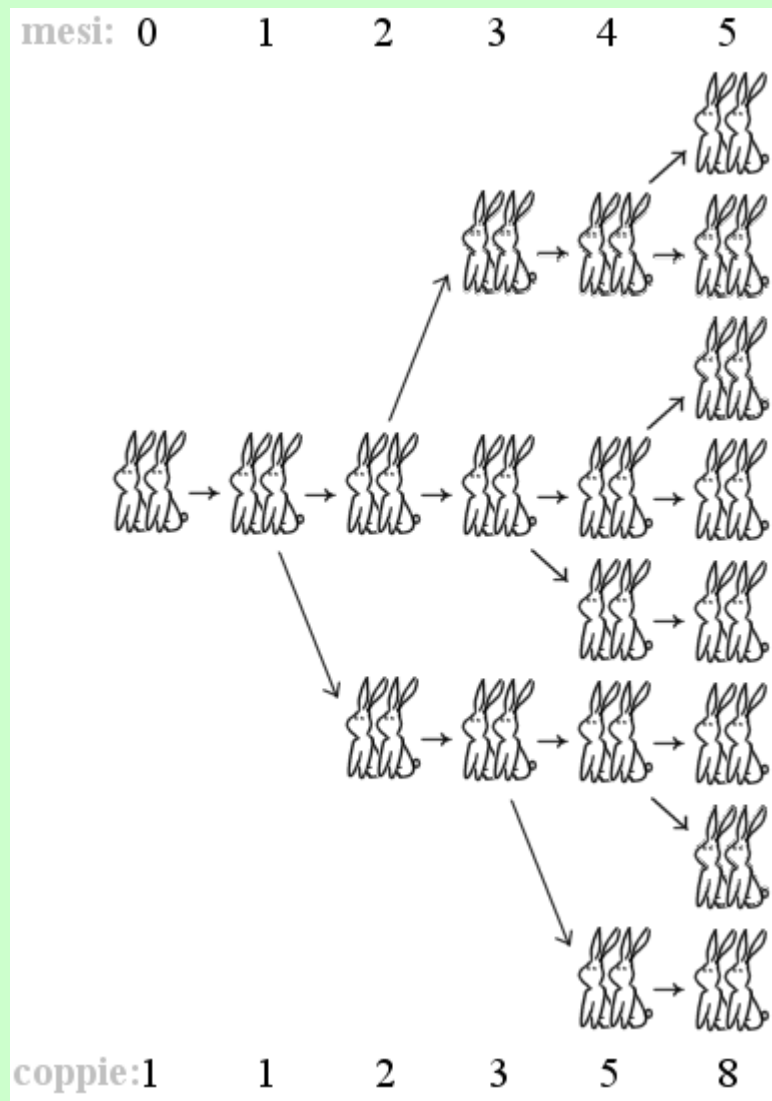
Una storia ordinata





Nascita di una successione

"Una coppia di conigli nati da poco e messa in uno spazio confinato. Questa coppia, e tutte le coppie dei loro successori, generano una nuova coppia al mese, a cominciare dal loro secondo mese di vita. Quante coppie ci saranno dopo uno, due, ... mesi, assumendo che nessuno muoia?"

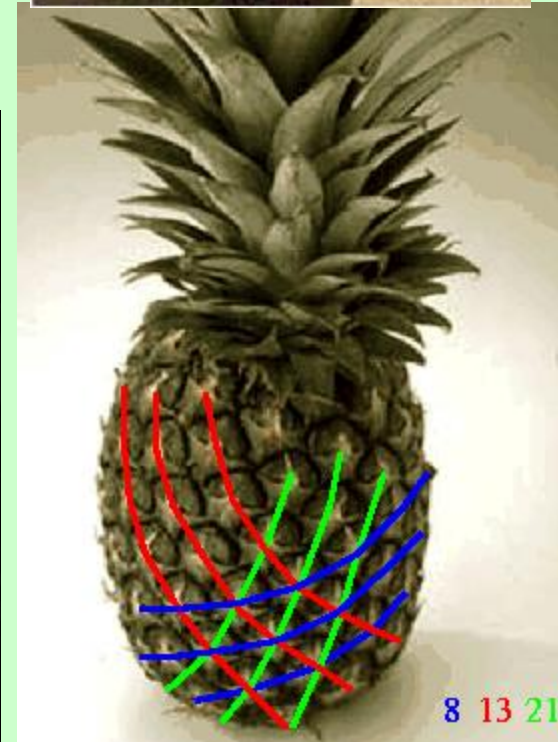
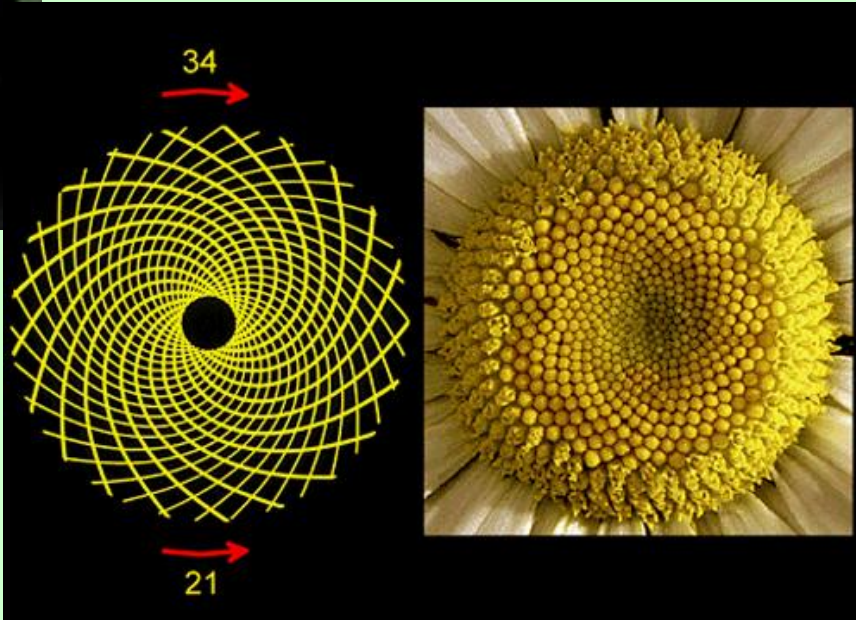
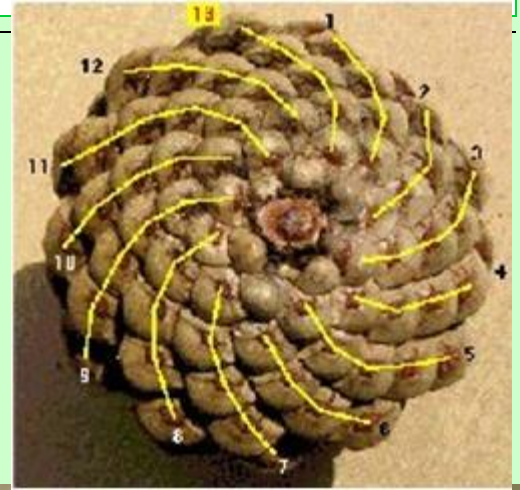


Un po' di conti

"Una coppia di conigli nati da poco e` messa in uno spazio confinato. Questa coppia, e tutte le coppie dei loro successori, generano una nuova coppia al mese, a cominciare dal loro secondo mese di vita. Quante coppie ci saranno dopo uno, due,... mesi, assumendo che nessuno muoia ?"

Mese	Vecchie coppie di conigli	Nuove coppie di conigli	Numero totale di coppie di conigli
0	1	0	1
1	1	0	1
2	1	1	2
3	2	1	3
4	3	2	5
5	5	3	8
n+1	A_n	A_{n-1}	A_{n+1}

Natura di una successione



Destino di una successione



Successione	$A(n)/ A(n-1)$	$A(n-1)/ A(n)$
1		
1	1	1
2	2	0,5
3	1,5	0,66667
5	1,66667	0,6
8	1,6	0,625
13	1,625	0,61538
21	1,61538	0,61905
34	1,61905	0,61765
55	1,61765	0,61818
89	1,61818	0,61798
144	1,61798	0,61806
233	1,61806	0,61803
377	1,61803	0,61804
610	1,61804	0,61803
987	1,61803	0,61803

Geometria di un numero

