An example calculation of KMP string matching function π(i)

i	1	2	3	4	5	6	7	8	9	10
P	a	b	a	b	a	b	a	b	c	a

P(i) : Prefix of the 'pattern' with length i

P(10)	a	b	a	b	a	b	a	b	c	a	Π(10)=1
P(9)		a	b	a	b	a	b	a	b	c	Π(9)=0
P(8)			a	b	a	b	a	b	a	b	Π(8)=6
P(7)				a	b	a	b	a	b	a	Π(7)=5
P(6)					a	b	a	b	a	b	Π(6)=4
P(5)						a	b	a	b	a	Π(5)=3
P(4)							a	b	a	b	Π(4)=2
P(3)								a	b	a	Π(3)=1
P(2)									a	b	Π(2)=0
P(1)										a	Π(1)=0

i	1	2	3	4	5	6	7	8	9	10
P	a	b	a	b	a	b	a	b	c	a
Π(i)	0	0	1	2	3	4	5	6	0	1