Example

Call Selection(A, 1, 15, 10)

A	1	2	3	4	9	6	7	8	11	10	12	5	15	14	13

p = 1, r = 15, i = 10, q = 13, k = 13

return Selection(A, 1, 12, 10)

A	1	2	3	4	9	6	7	8	11	10	12	5	13	14	15

Goal is to find 10^{th} item in A[1..15].
Current problem is to find 10^{th} item in A[1..15]

Yellow item is current pivot; Grey items have been thrown away.
Search is only done in white (+yellow) subarray.

After Pivoting, problem is reduced to finding 10^{th} item in A[1..12]

Example

Call Selection(A, 1, 12, 10)

A	1	2	3	4	9	6	7	8	11	10	12	5	13	14	15

p = 1, r = 12, i = 10, q = 5, k = 5

return Selection(A, 6, 12, 5)

A	1	2	3	4	5	6	7	8	11	10	12	9	13	14	15

Goal is to find 10^{th} item in A[1..15].
Current problem is to find 10^{th} item in A[1..12]

Yellow item is current pivot; Grey items have been thrown away.
Search is only done in white (+yellow) subarray.

After Pivoting, problem is reduced to finding 5^{th} item in A[6..12]

Example

Call Selection(A, 6, 12, 5)

A	1	2	3	4	5	6	7	8	11	10	12	9	13	14	15

p = 6, r = 12, i = 5, q = 9, k = 4

return Selection(A, 10, 12, 1)

A	1	2	3	4	5	6	7	8	9	10	12	11	13	14	15

Goal is to find 10^{th} item in A[1..15].
Current problem is to find 5^{th} item in A[6..12]

Yellow item is current pivot; Grey items have been thrown away.
Search is only done in white (+yellow) subarray.

After Pivoting, problem is reduced to finding 1^{st} item in A[10..12]

Example

Call Selection(A, 10, 12, 1)

A	1	2	3	4	5	6	7	8	9	10	12	11	13	14	15

p = 10, r = 12, i = 1, q = 11, k = 2

return Selection(A, 10, 10, 1)

A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

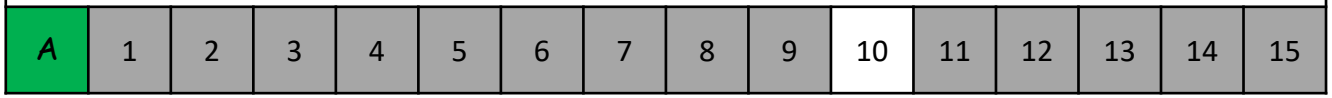
Goal is to find 10^{th} item in A[1..15].
Current problem is to find 1^{st} item in A[10..12]

Yellow item is current pivot; Grey items have been thrown away.
Search is only done in white (+yellow) subarray.

After Pivoting, problem is reduced to finding 1^{st} item in A[10..10]

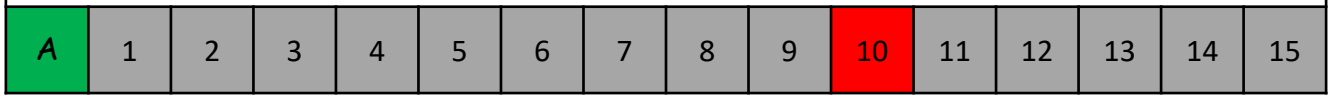
Example

Call Selection(A, 10, 10, 1)



p = 10, r = 10, i = 1

return A[10]



Goal is to find 10^{th} item in A[1..15].
Current problem is to find 1^{st} item in A[10..10]

Yellow item is current pivot; Grey items have been thrown away.
Search is only done in white (+yellow) subarray.

After Pivoting, problem is solved!