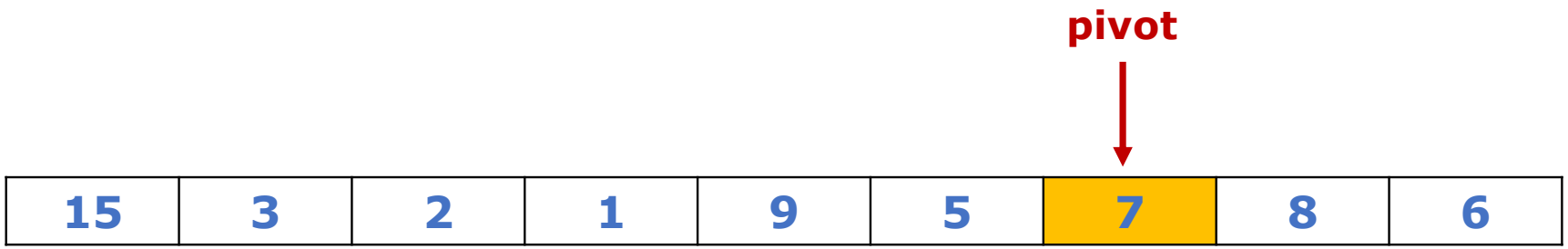
CS265
Advanced Programming Techniques

Quicksort

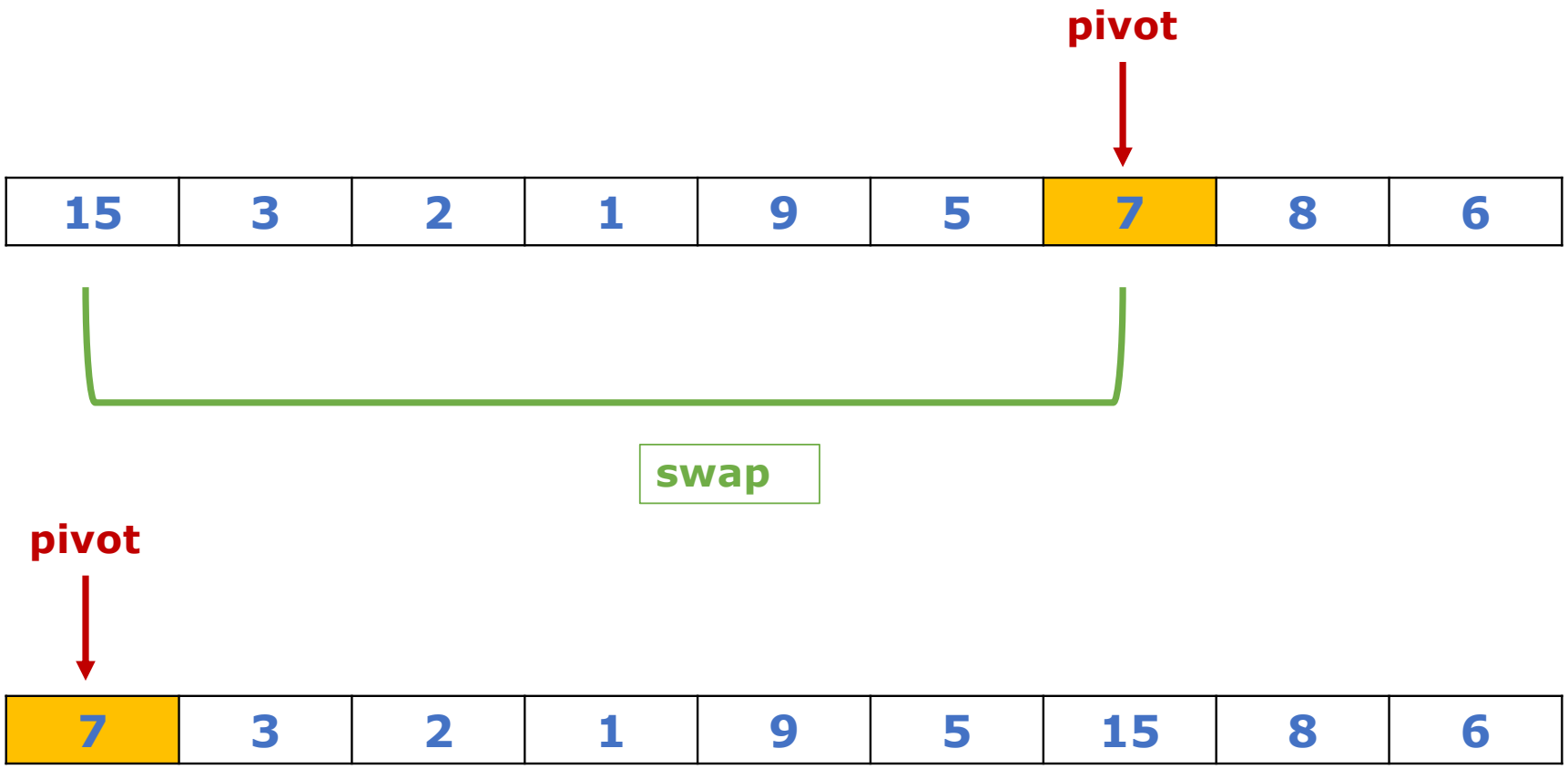
Example - Quicksort

15	3	2	1	9	5	7	8	6

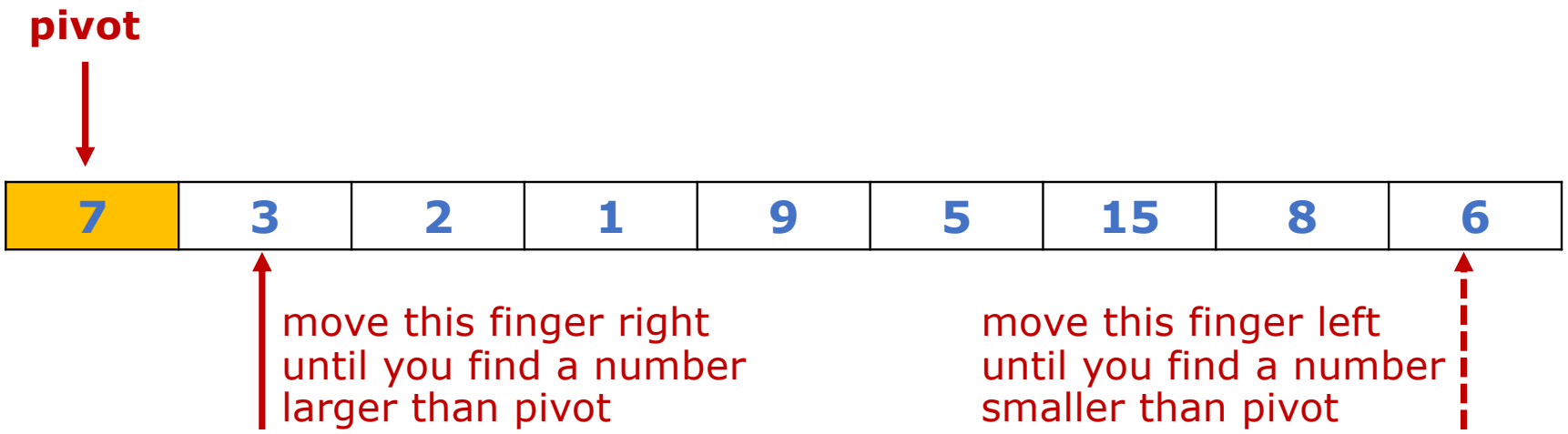
Randomly pick a pivot



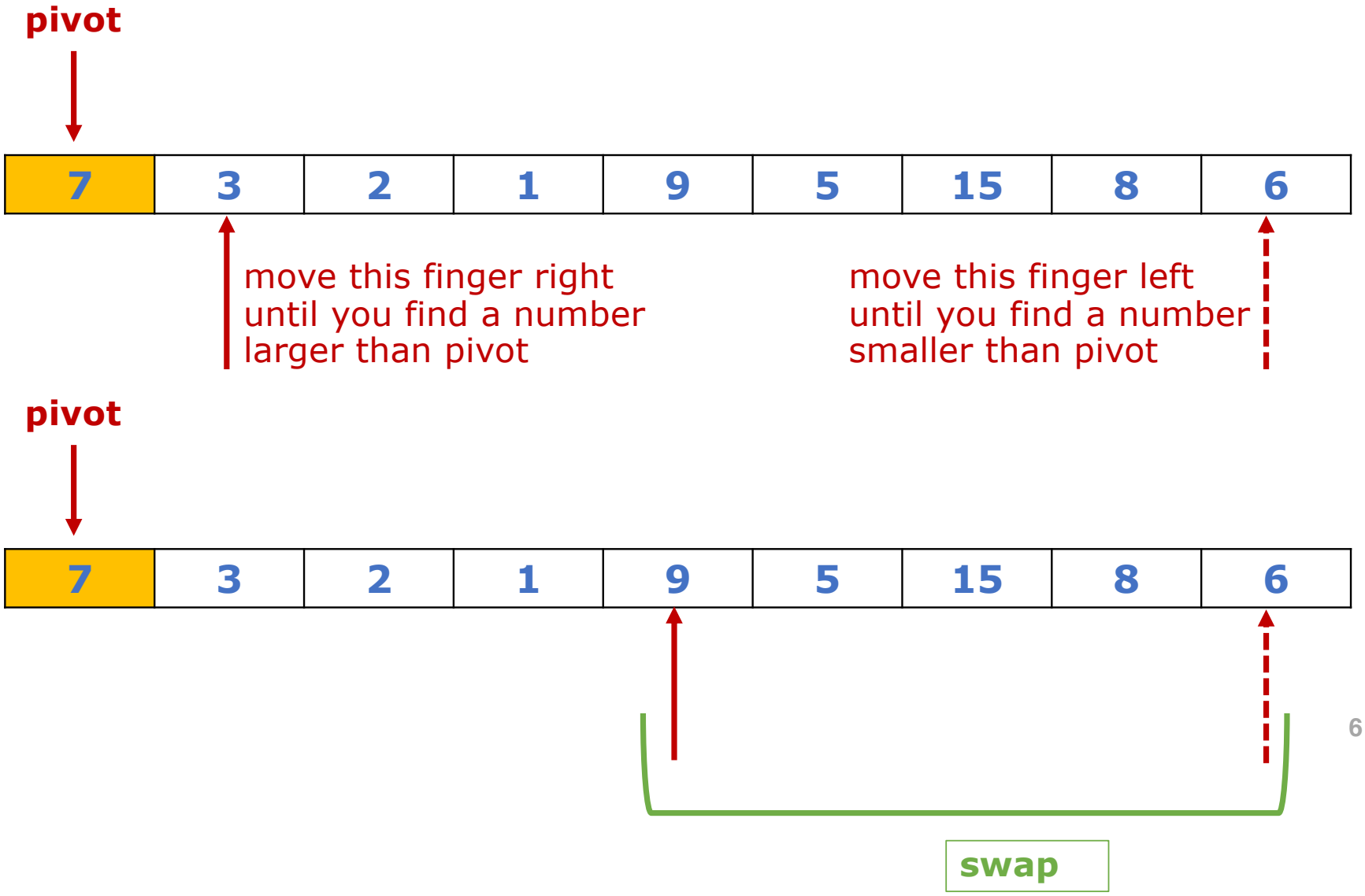
Move the pivot to the first spot temporarily



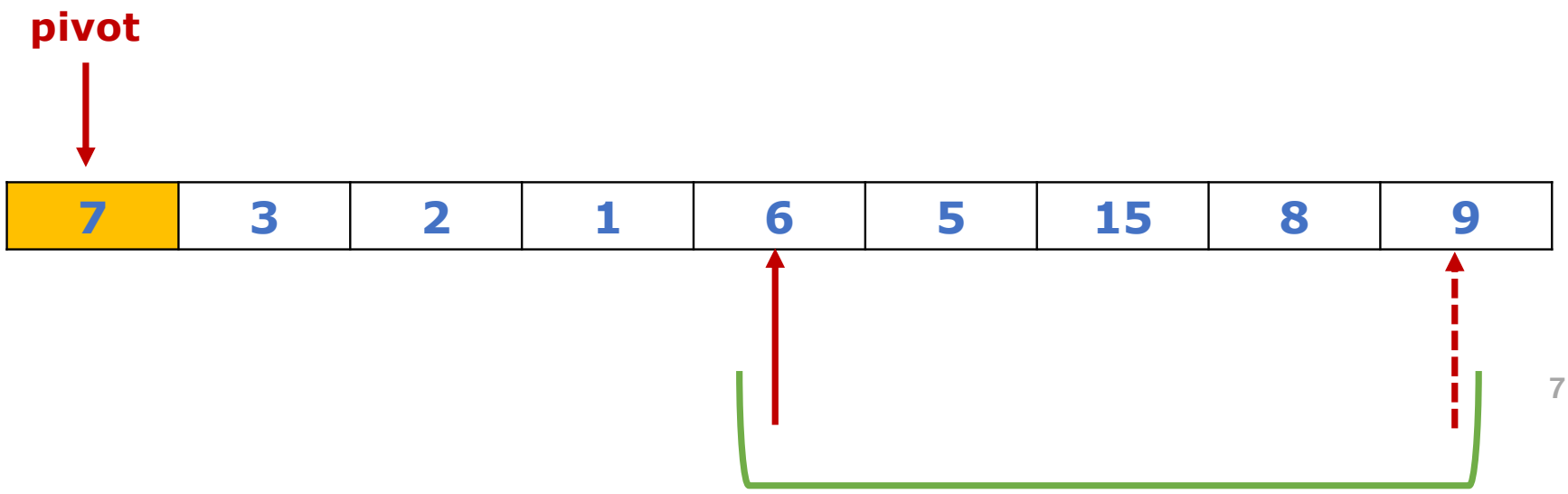
Divide the array into the number smaller than pivot and larger than pivot

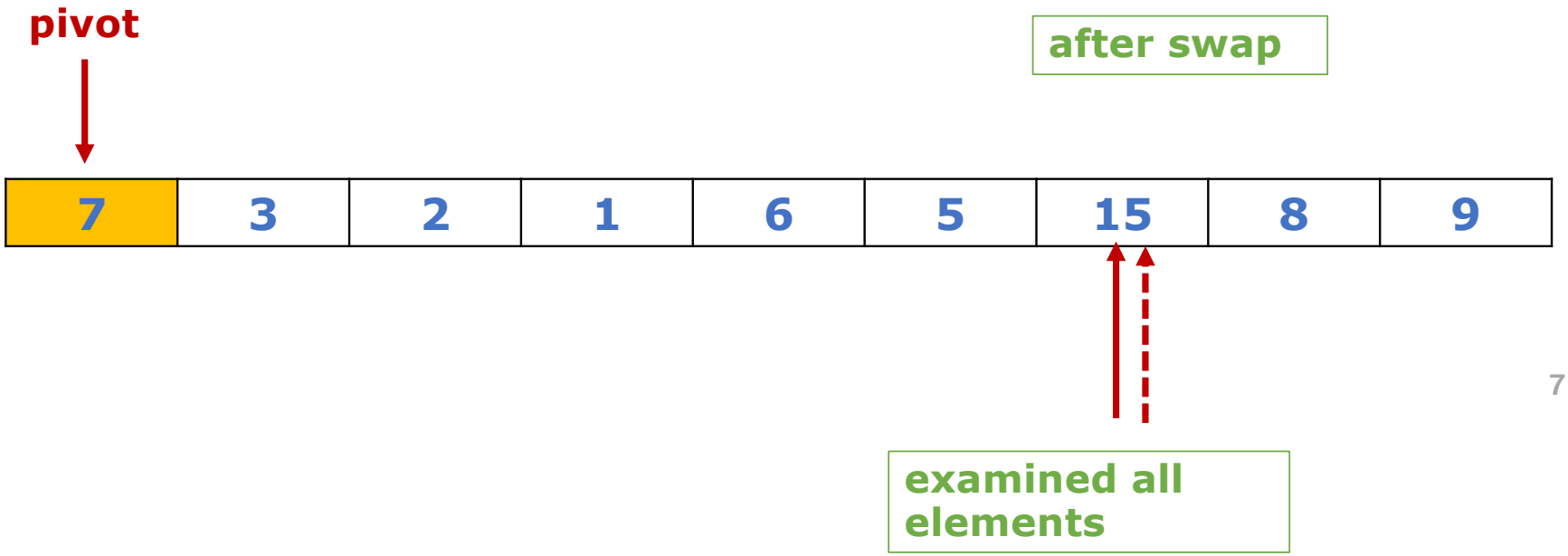


Find the number (from the left finger) larger than the pivot and the number (from the right figer) smaller than the pivot and swap them

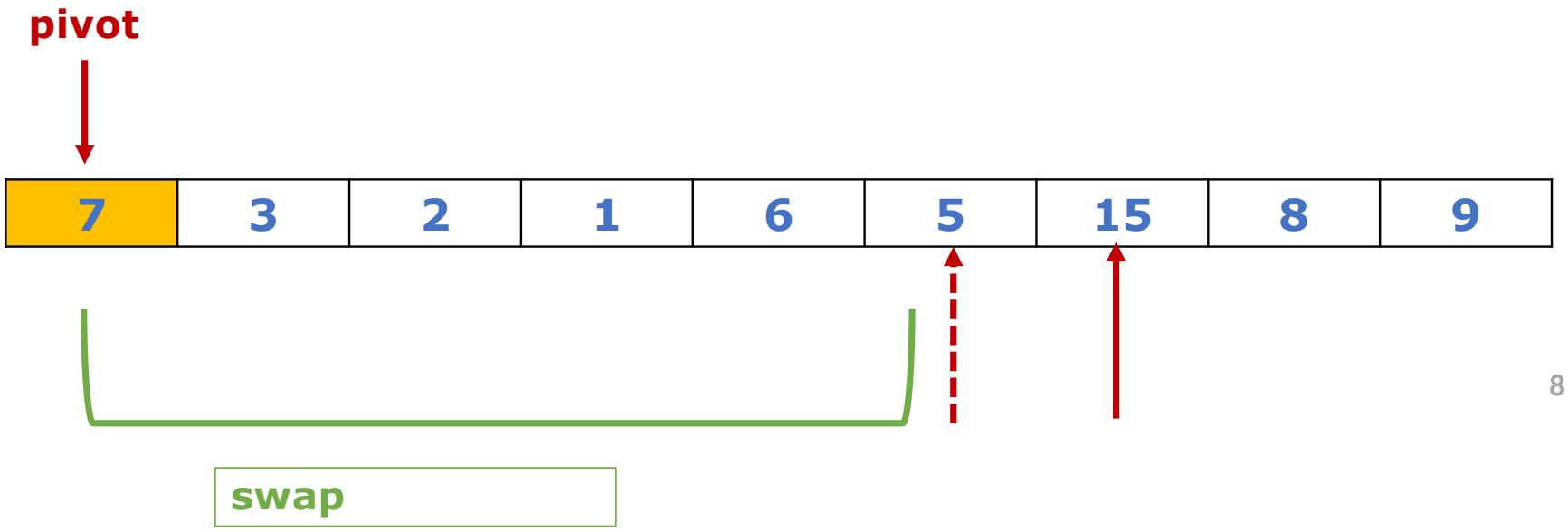


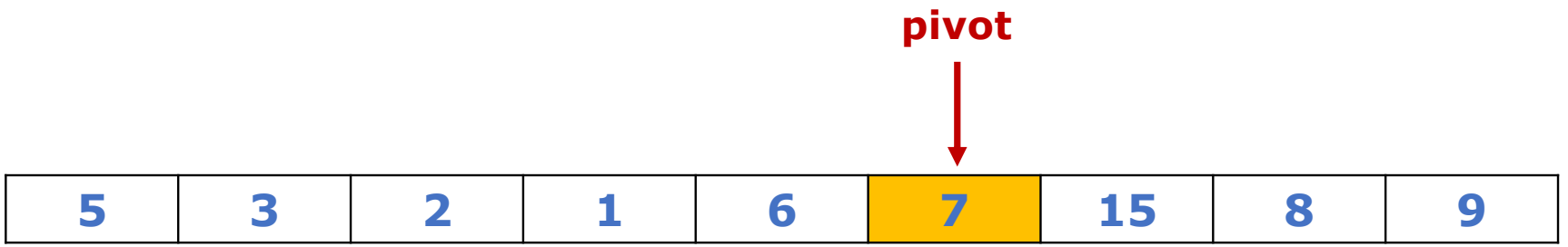
Swap the elements and continue two-finger method – continue until the fingers meet



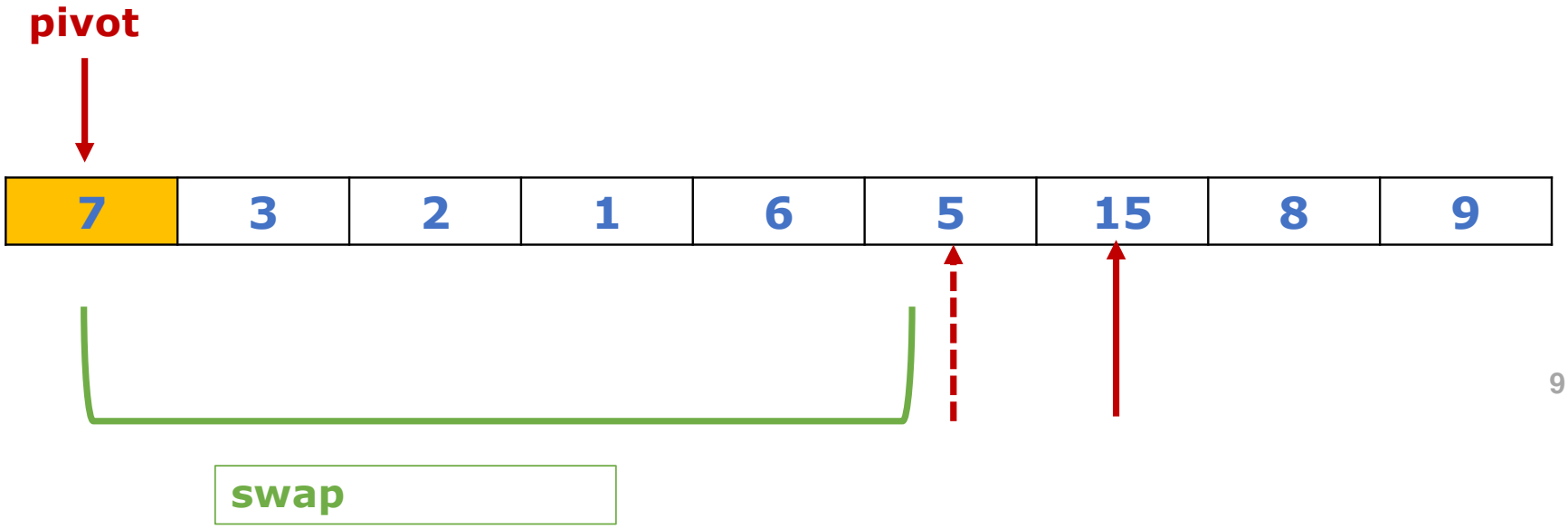


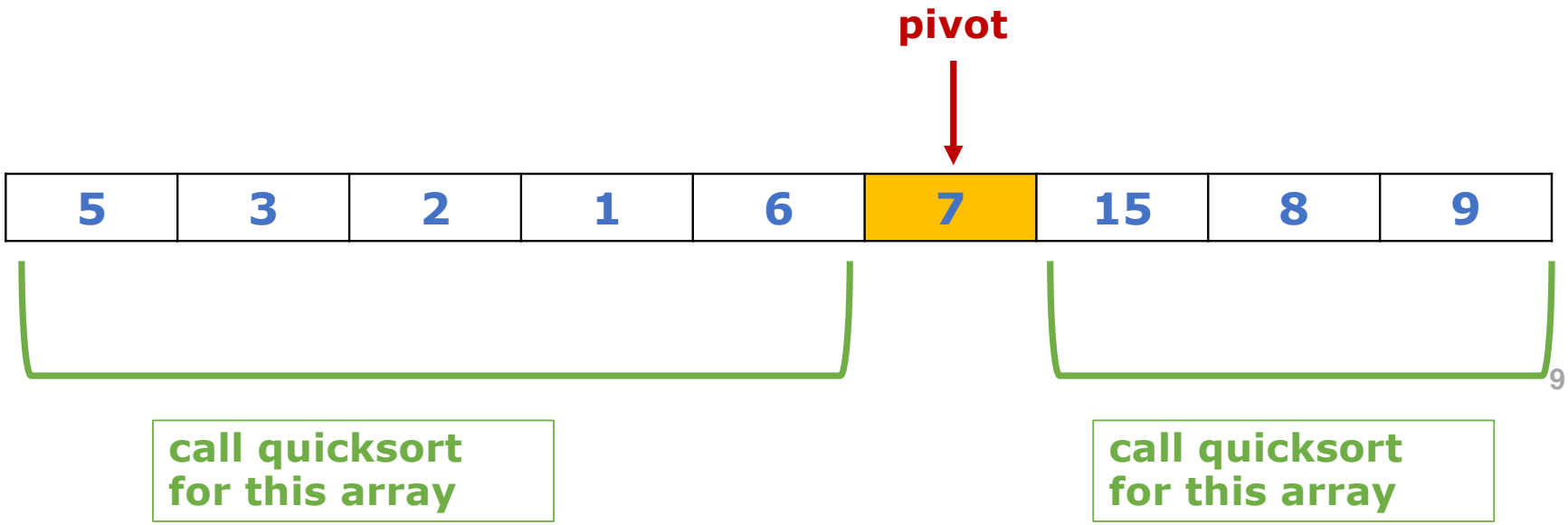
Swap the pivot back in place – Pivot now in the right spot



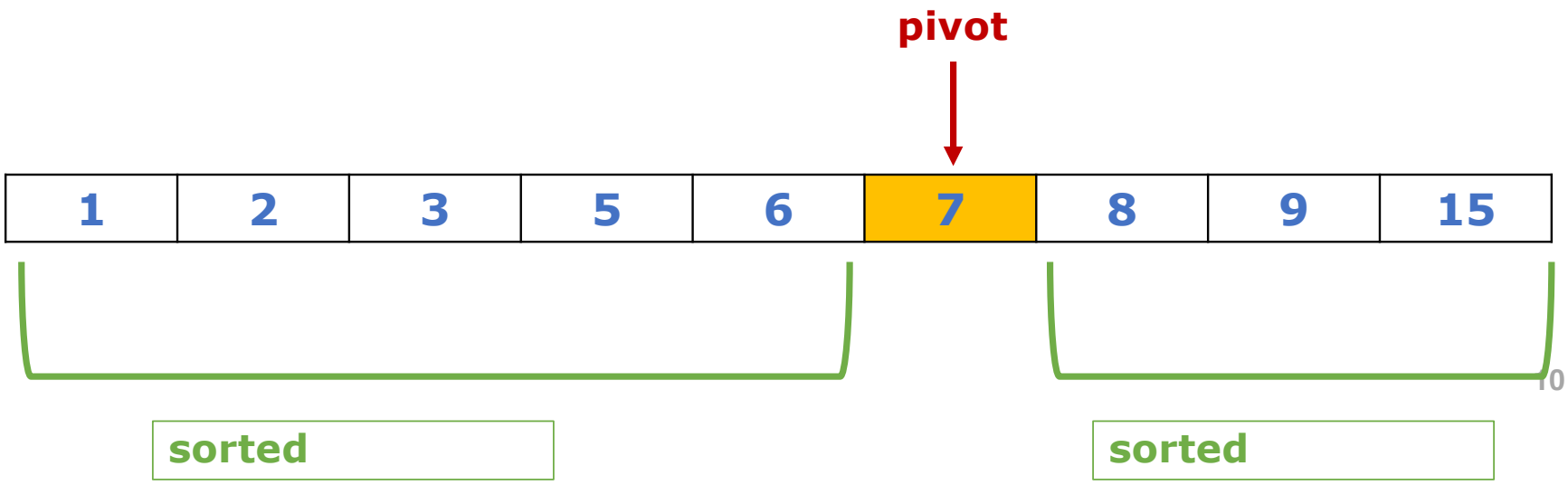


Run quisort recursively on the subarray to the left and on the subarray to the right





The final sorted array



Resources

You tube video

https://www.google.com/search?q=quick+sort+pivot+to+the+feont&oq=quick+sort+pivot+to+the+feont&aqs=chrome..69i57j33.8923j0j4&client=ms-android-google&sourceid=chrome-mobile&ie=UTF-8#kpvalbx=_CUfBXoqfD-akggebkp-YDQ55