

### Merge sort

1. Divides the array in half
  2. Sorts each of these halves
  3. Merges them back together
- Each of these halves have the same sorting algorithm applied to it
  - Eventually you are merging just 2 single element arrays

### Quick sort

Array is split in two parts based on a pivot point (one with elements larger than the pivot, one with elements smaller than the pivot) and is recursively repeated

Divide-and-conquer, massively recursive sort

### Radix sort

1. First look at the least sig fig and sort everybody based on this.
2. Sort based on 2nd most sig fig -> Whenever I have repetition in the 2nd digit -> the 2nd order already in the 1st one kicks in
3. Repeat for the most sig dig and maintain everybody else

Type of stable sort (order of duplicates is maintained)

### Asymptotic analysis

BIG-OH	INFORMAL NAME
$O(1)$	constant
$O(\log n)$	logarithmic
$O(n)$	linear
$O(n \log n)$	$n \log n$
$O(n^2)$	quadratic
$O(n^3)$	cubic
$O(2^n)$	exponential

C

By **kimr843**  
[cheatography.com/kimr843/](http://cheatography.com/kimr843/)

Not published yet.  
Last updated 3rd October, 2016.  
Page 1 of 1.

Sponsored by **CrosswordCheats.com**  
Learn to solve cryptic crosswords!  
<http://crosswordcheats.com>