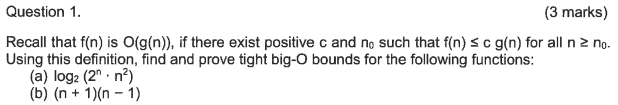
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****

a,

O(n)

b,

O(n^2)

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Description automatically generated with medium confidence**

a yes, insertion sort, if the array is partial sorted, O(n).

b the same, f1 = f2

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Description automatically generated with low confidence**

def fib(n):

if n == 1 or n == 2:

return 1

else

return fibn

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Description automatically generated with medium confidence**

insertion sort is adaptive

the rest are not adaptive

select a smallest number every loop, , time complexity is always O(n^2)

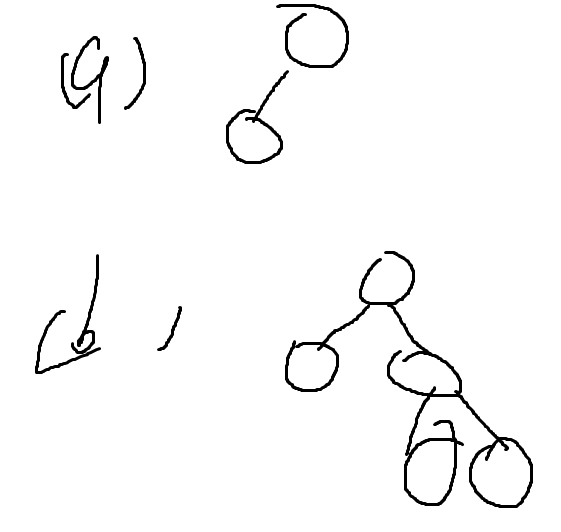
compare and merge, time complexity is always O(logn)

will be worse, time complexity is O(n^2)

depends on how to arrange buckets, time complexity is O(n+nlogn-nlogm)

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Description automatically generated with low confidence**



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Description automatically generated**

new\_head;

def reverse(head):

p1 = head p2 = head.next p3 = p2.next

while (p3.next):

p1 = p2

p2 = p3

p3 = p3.next

end

new\_head.next = p3

p2.next = null

reverse(head)

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Description automatically generated

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Description automatically generated with medium confidence**

A picture containing handwriting, calligraphy, font, typography

Description automatically generated

**A picture containing text, sketch, diagram, white

Description automatically generated**

A picture containing drawing, sketch, line art, clipart

Description automatically generated

A picture containing drawing, sketch, line art, clipart

Description automatically generated**A picture containing text, font, receipt, white

Description automatically generated** A picture containing sketch, drawing, line art, clipart

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