6, 10, 20, 34, 23, 21, 500, 22, 100, 13, 2, 15, 19, ...

max-heap | min-heap

1) → 6

max-heap: [6]

min-heap: [ ]

2) → 10

max-heap: [6]

min-heap: [10]

3) → 20

max-heap: [6]

min-heap: [10, 20]

4) → 34

max-heap: [6]

min-heap: [10, 20, 34]

5) → 23

max-heap: [10, 6]

min-heap: [20, 34, 23]

6) → 21

max-heap: [10, 6]

min-heap: [20, 23, 34, 21]

EXTRA STEPS

IMPORTANT: balance the length of the two heaps

4.1

[10, 6]

[20, 34]

IMPORTANT: find the right place for an element in the min-heap

5.1

[10, 6]

[20, 23, 34]

! balance length

! find the right place

6.1

[20, 10, 6]

[23, 34, 21]

6.2

[20, 10, 6]

[21, 23, 34]