

recursive function to put even values in list before odd  
even-before-odd (numbers, low, high)

[1, 3, 4, 5, 8]

↑  
- check if 'high' is even

- it is, so we swap with low and increment low

[1, 3, 4, 5, 8]

[8, 3, 4, 5, 1]

- high is not even

- decrement high

[8, 3, 4, 5, 1]

- high is not even

- decrement high

[8, 3, 4, 5, 1]

- high is even

- swap with low and increment low

[8, 3, 4, 5, 1]

[8, 4, 5, 3, 1]

- low and high are equal, we're done

[2, 8, 4, 6, 3, 5, 16, 12]

- check if high is even

- it is, so swap with low and increment low

[2, 8, 4, 6, 3, 5, 16, 12]

[12, 8, 4, 6, 3, 5, 16, 2]

- high is even, swap with low and increment low

[12, 8, 4, 6, 3, 5, 16, 2]

[12, 2, 4, 6, 3, 5, 16, 8]

- high is even, swap with low, increment low

[12, 2, 4, 6, 3, 5, 16, 8]

[12, 2, 8, 6, 3, 5, 16, 4]

- high is even, swap with low, increment low

[12, 2, 8, 6, 3, 5, 16, 4]

[12, 2, 8, 4, 3, 5, 16, 6]

- high is even, swap with low, increment low

[12, 2, 8, 4, 3, 5, 16, 6]

[12, 2, 8, 4, 6, 5, 16, 3]

- high is odd, decrement high

[12, 2, 8, 4, 6, 5, 16, 3]

- high is even, swap with low, increment low

[12, 2, 8, 4, 6, 5, 16, 3]

[12, 2, 8, 4, 6, 16, 5, 3]