

Sam Hopkins
Hw 13
6.)

6.)

$$S = [5, 15, -30, 10, -5, 40, 10]$$

[5]	(5, 15)	[5]	(10)	(15, -30)	(-30, 10)	(10, -5)	(-5, 40)	(40, 10)
5	15	-30	10	-5	40	10		

~~Temporary sequence~~

Contiguous Sequence (S):

Sequence = [], int max = 0, endingArray = []

for (int i = 0; i < S.length; i++) {

 if (max + S[i] <= 0) {

 Sequence = []

 max = 0

 }

 else {

 Sequence.add(S[i])

 max += S[i]

}

endingArray.add({max, sequence})

}

max = 0,

for (int i = 0; i < endingArray.length; i++) {

 if (max < endingArray[i].max) {

 Sequence = endingArray[i].sequence

}

}

return Sequence

Total complexity = $O(n) \Rightarrow O(n)$ for two loops $\xrightarrow{\text{goes to}} O(n)$