

6.1.3

a) a list with a single element: [3]
block 1 and block 2 overlap

b) search([1], 2)

The list doesn't include 2.

c)

block 1: The element is the first element of the list.

block 2: The element is not in the list.

block 3: The element is in some position other than first.

6.1.4

a)

x

elements of the stack

b)

x == null?

length(stack)

c)

characteristic 1: x == null or x != null

characteristic 2: number of elements of the stack

d)

characteristic 1:

block 1: x is null

block 2: x is not null

characteristic 2:

block 1: zero elements in the stack

block 2: one element in the stack

block 3: two elements in the stack

block 4: more than two elements in the stack

e)

characteristic 1:

block 1: x is null

block 2: x = Integer.ValueOf(5)

characteristic 2:

block 1: zero elements in the stack

[]

block 2: one element in the stack

[7]

block 3: two elements in the stack

[6, 4]

block 4: more than two elements in the stack

[1, 3, 7]

6.2.4

a) yes

b) yes

c) no, s1 = null and s2 = [2]

d) no, s1 = s2 = [2]

s1 is a subset of s2.

s2 is a subset of s1.

e) 6

f)

s1 is null and s2 is null
s1 is null and s2 is empty
s1 is null and s2 has a single element
s1 is null and s2 has more than one element
s1 is empty and s2 is null
s1 is empty and s2 is empty
s1 is empty and s2 has a single element
s1 is empty and s2 has more than one element
s1 has a single element and s2 is null
s1 has a single element and s2 is empty
s1 has a single element and s2 has a single element
s1 has a single element and s2 has more than one element
s1 has more than one element and s2 is null
s1 has more than one element and s2 is empty
s1 has more than one element and s2 has a single element
s1 has more than one element and s2 has more than one element

6.2.6

a)

the number of elements of the queue

x

b, c)

characteristic 1: the number of elements in the queue

block 1: zero number of elements

block 2: single element

block 3: more than one element (base block)

characteristic 2: x

block 1: x is null

block 2: x is not null (base block)

d)

characteristic 1: the number of elements in the queue

block 1: []

block 2: [8]

block 3: [3, 4, 7]

characteristic 2: x

block 1: x is null

block 2: x = 9

e)

test 1: queue = [], x = 7

test 2: queue = [4], x = 7

test 3: queue = [3, 6, 10], x = 7

test 4: queue = [5, 1, 9], x = null