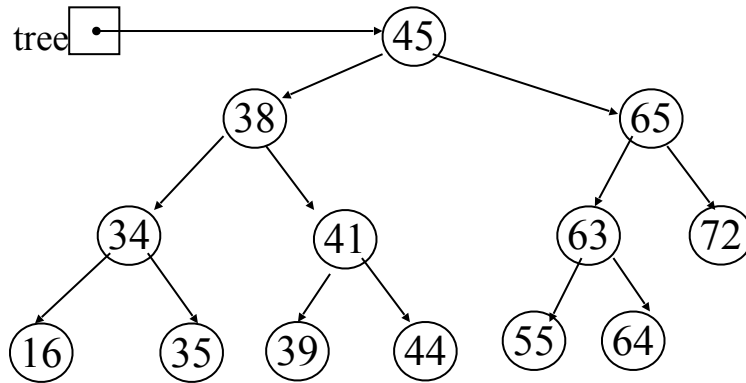1. Given the following binary tree:

(a) What is the inorder traversal of the tree?

16 34 35 38 39 41 44 45 55 63 64 65 72

(b) What is the preorder traversal of the tree?

45 38 34 16 35 41 39 44 65 63 55 64 72

(c) What is the postorder traversal of the tree?
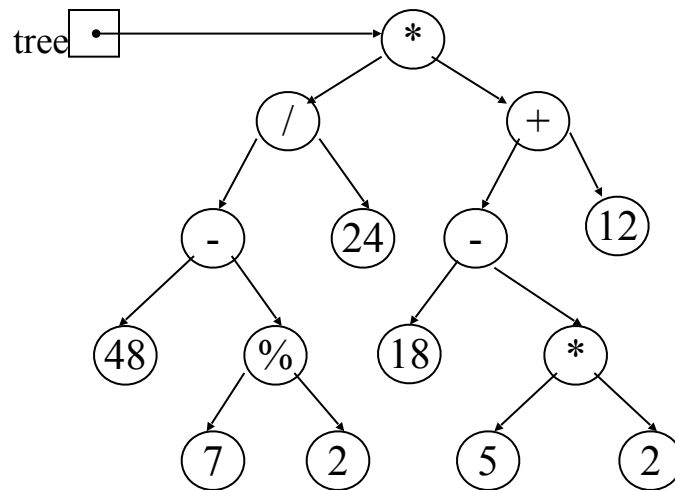
16 35 34 39 44 41 38 55 64 63 72 65 45

(d) What is the height of the tree?   What nodes are on level 2?

Height is 3.
Nodes on level 2: 34 -41-63-72

2. Given the following binary expression tree:

(a) What is the inorder traversal of the tree?

48-7%2/24*18-5*2+12

(b) What is the postorder traversal of the tree?

 48 7 2 % - 24 / 18 5 2 * - 12 + *

(c) What does it evaluate to if using integer division?   **50**

(d) What does it evaluate to if using float division? **49.25**

3. The elements in a binary tree area to be stored in an array. Each element is a nonnegative int value.

a. What value can you use as a dummy value, if the binary tree is not complete? _null_
b. Show the contents of the array, given the tree illustrated below

[0] 14
[1] 73
[2] 21
[3] 7
[4] Null
[5] 19
[6] 6
[7] Null
[8] 51
[9] Null
[10] Null
[11] Null
[12] Null
[13] Null
[14] 45

tree

14
73   21
7   19   6
51   45
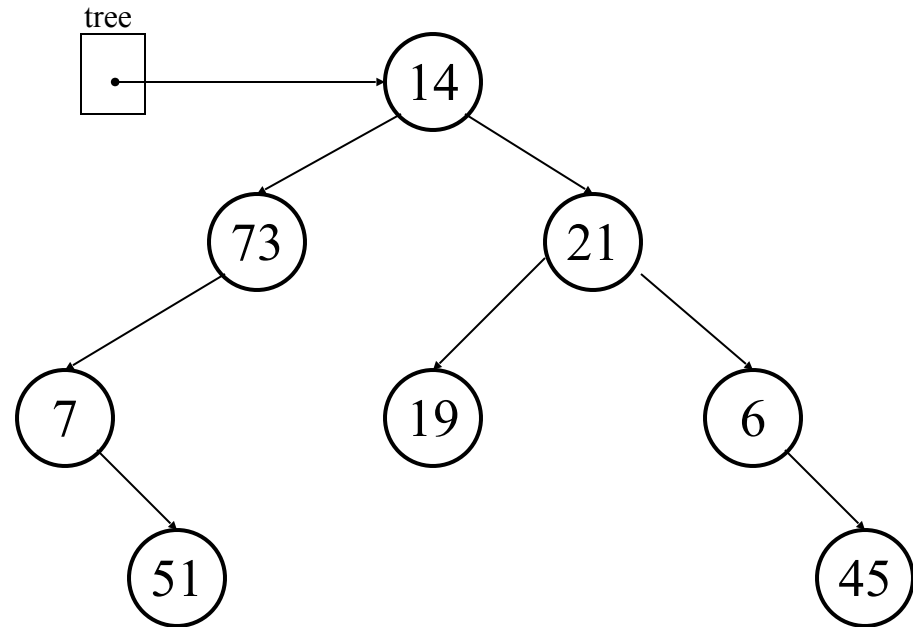
4. Given the array pictured below, draw the binary tree that can be
created from its elements.

[0]	35
[1]	20
[2]	71
[3]	40
[4]	52
[5]	63
[6]	null
[7]	17
[8]	25
[9]	null
[10]	7
[11]	null
[12]	45