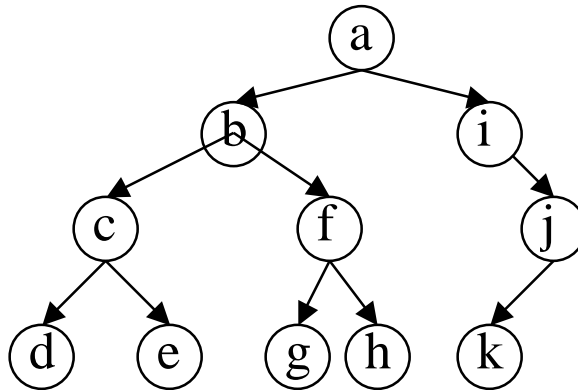


1. This question refers to the following binary tree.



- (a) Which node(s) are the root(s) of the tree?
- (b) Which node(s) are the leaf(s) of the tree?
- (c) Which node(s) are ancestor(s) of node f ?
- (d) Which node(s) are the children of node b ?

2. The following data structure can be used to represent a binary tree node in C++:

```
struct BTreeNode {  
    int item;  
    BTreeNode *left;  
    BTreeNode *right;  
};
```

Complete the definition of the following function so it returns the number of nodes in the binary tree with root `r`.

```
// = number of nodes in the binary tree with root r  
int CountNodes(BTreeNode *r) {
```

```
}
```