```
Node{ int key
        Node left
        Node right
        Node p
        Int visit}
Tree{Node root}

Procedure main():
        Read str
        end=findEnd(str,0)
        Tree tree
        tree.root=makeTree(str,0,end)
        Read s,k
        start=searchNode(tree.root,s)
        x=findSum(tree,start,k)
        Print x

Procedure searchNode(node,key):
        If node==NIL:
                Return NIL
        If node.key==key:
                Return node
        x=searchNode(node.left,key)
        If x!=NIL:
                Return x
        x=searchNode(node.right,key)
        Return x

Procedure findSum(tree ,x,k):
        If x==NIL or k<0 or visit==1:
                Return 0
        ans=x.key
        x.visit=1
        ans+=findSum(tree ,x.p,k-1)
        ans+=findSum(tree ,x.left,k-1)
        ans+=findSum(tree ,x.right,k-1)
        Return ans

Procedure makeTree(str, start,end):
        Node x
        x.key=0
        x.visit=0
        If start+2 == end:
                Return NIL
```

```
        i=start+2
        While str[i]!= ‘ ‘:
                x.key=x.key*10+int (str[i])
                i+=1
        p=i+1
        q=findEnd(str,p)
        x.left=makeTree(str,p,q)
        If x.left!=NIL:
                x.left.p=x

        p=q+2
        q=findEnd(str,p)
        x.right=makeTree(str,p,q)
        If x.right!=NIL:
                x.right.p=x
        Return x


Procedure findEnd(str,start):
        i=start
        a=0
        While str[i] !=NULL:
                If str[i]==’(’:
                        k+=1
                Else if str[i]==’)’:
                        k-=1
                If k==0:
                        Return i
                i+=1
```