Homework 4, CSCE 240, Summer 2016

Your assignment is to write a recursive program to do a depth-first search of a tree to minimize an objective function.

You have been given a tree, represented as a complete binary tree of nodes, by subscript number in a `vector`, with the root node having subscript 1. (Subscript zero is simply not used.) Each line in the input data represents a node, with node subscript number, child node subscript numbers, and the cost of visiting that node. The leaf nodes are indicated by having -99 as the node subscript numbers of their "children".

The cost to be minimized is the entire path cost down to and including the cost at the leaf. One path, for example, goes from node 1 to node 3 to node 6 to node 13 to node 26. In your sample data, the costs at each node are:

```
node  1 -- 97
node  3 -- 34
node  6 -- 66
node 13 -- 49
node 26 -- 83
```

and thus the cost to the leaf of this path is $97 + 34 + 66 + 49 + 83 = 329$. What you are to minimize is the cost of this value.