Name:
Student #: SOLUTION

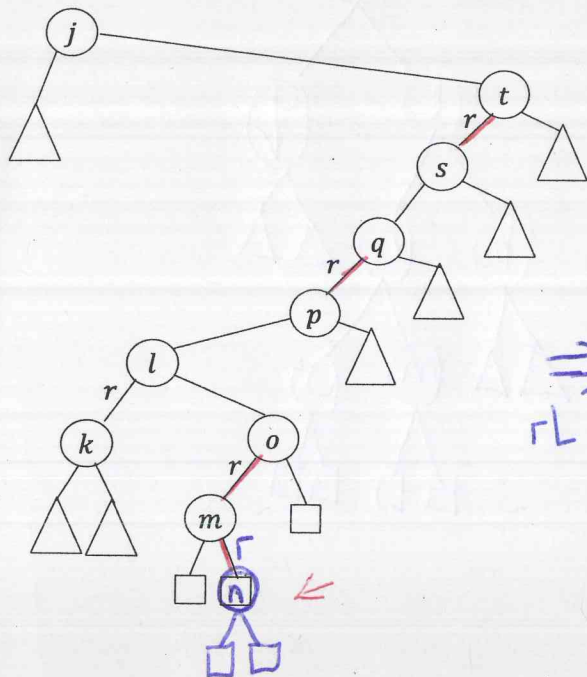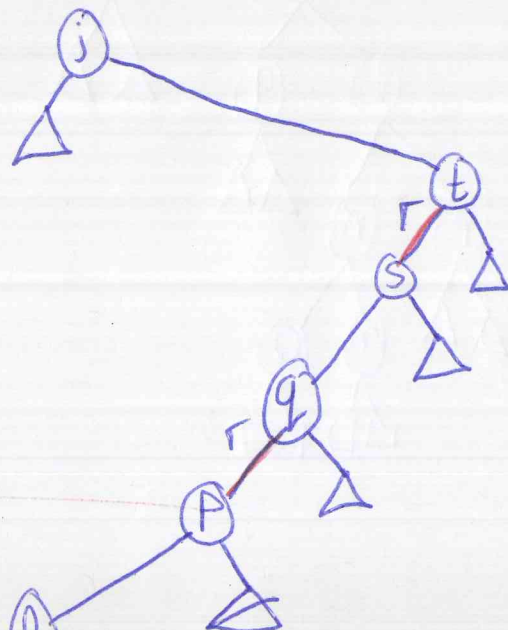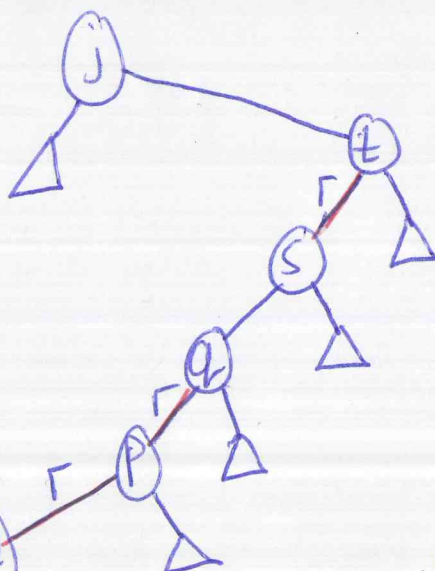**Question** [2 marks]
Show the result of inserting the letter n into the red-black tree given below (rooted at j). Note that only the search path is shown, and you need to include only the same nodes in your answer. Indicate any red edges with a lowercase r label on the edge as I have done. Your final tree should itself be a red-black tree. (Note: $\triangle$ = subtree, $\square$ = leaf.)
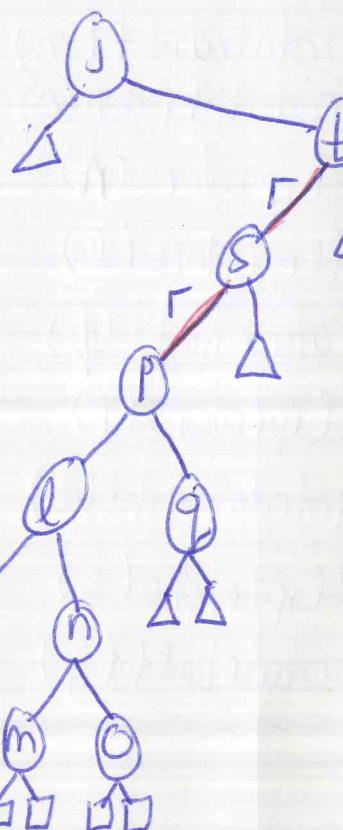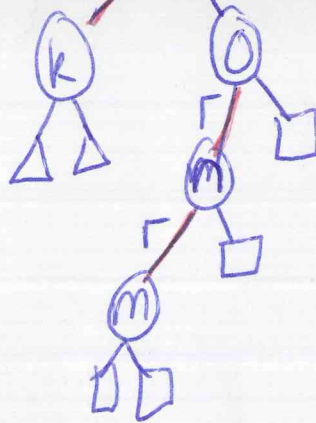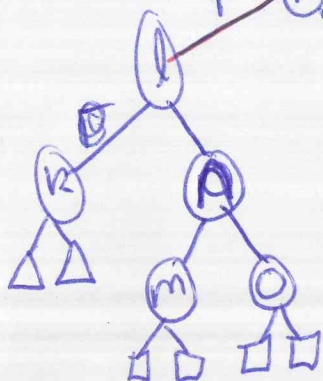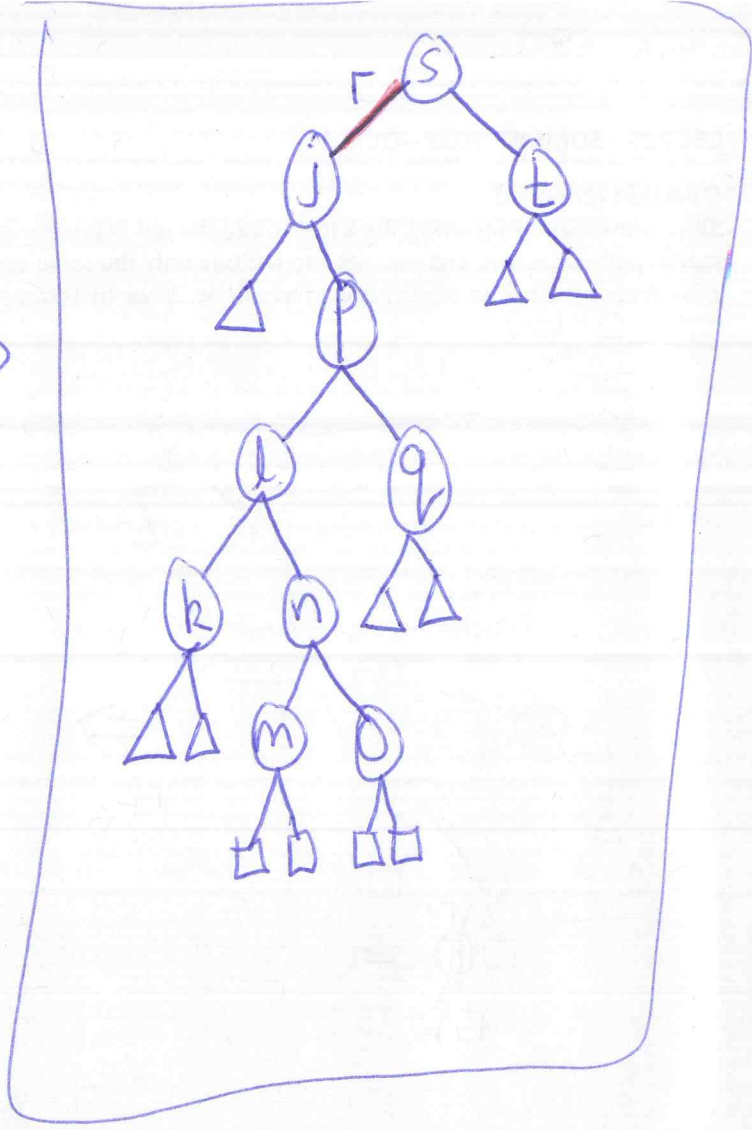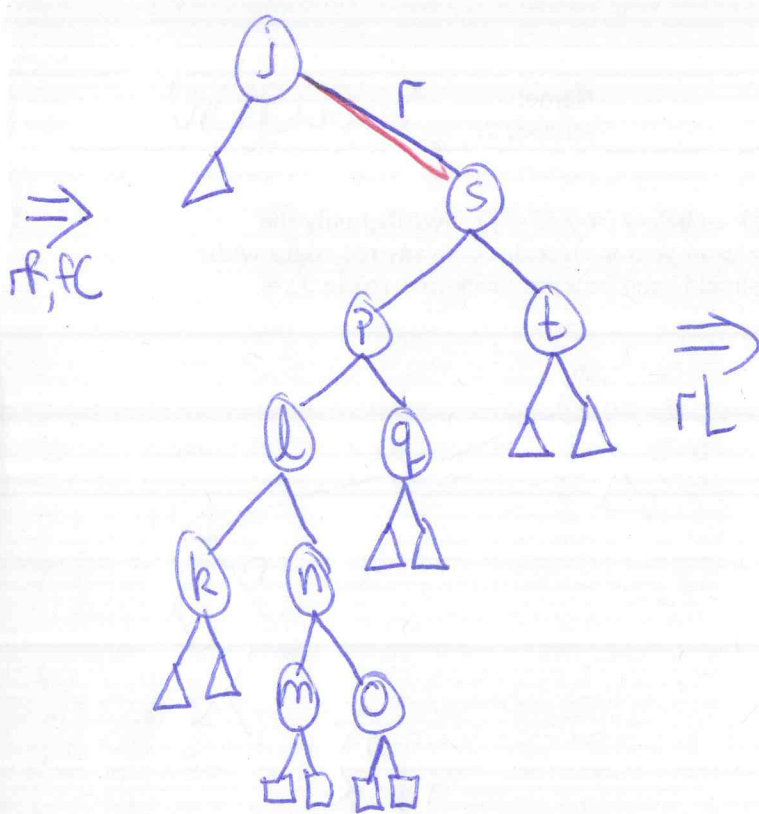
$\Rightarrow$
rf, fC

$\Rightarrow$
rL

List of operations

put (n)
rotateLeft (m)
rotateRight (o)
flipColors (n)
flipColors (l)
rotateRight (q)
flipColors (p)
rotateRight (t)
flipColors (s)
rotateLeft (j)