

```

Node* balance(Node* root, int dir) {
→ if (red(root.left)) {
    if (red(root.right)) {
        root.left = blacken(root.left);
        root.right = blacken(root.right);
        root.black = false;
    }
    else {
        if (red(root.left.left)) {
            root = rb.rotate.single(
                root, RIGHT);
        }
        else {
            if (red(root.left.right)) {
                root = rb.rotate.dbl(
                    root, RIGHT);
            }
            else {
            }
        }
    }
}
else {
}
return root;
}

```

