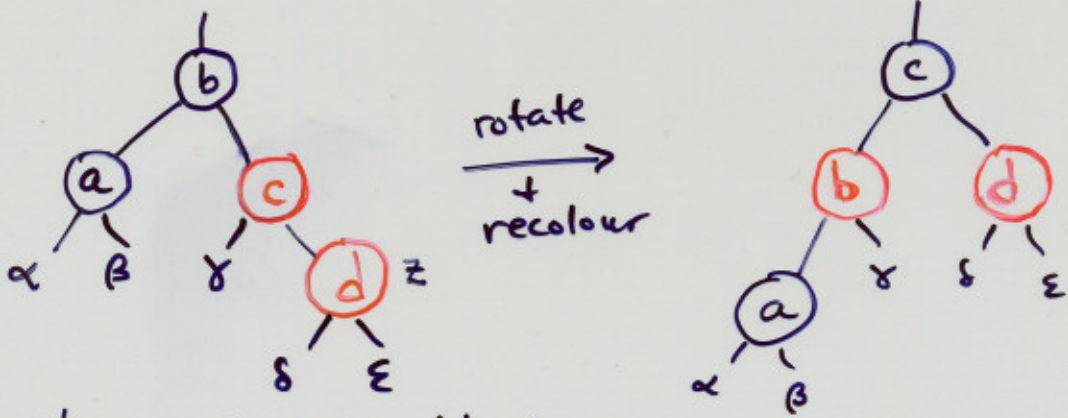


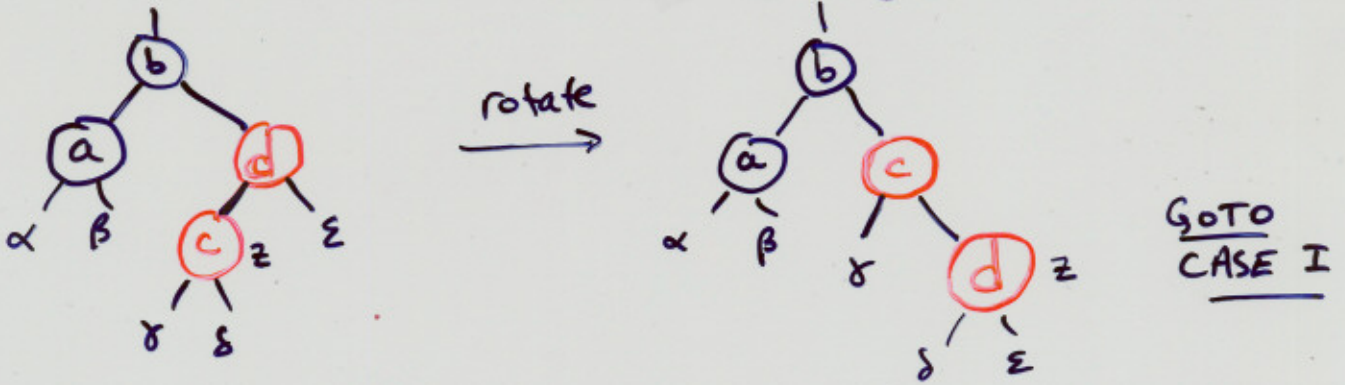
Fixing tree after insertion.

Violation: z is red child of red child.

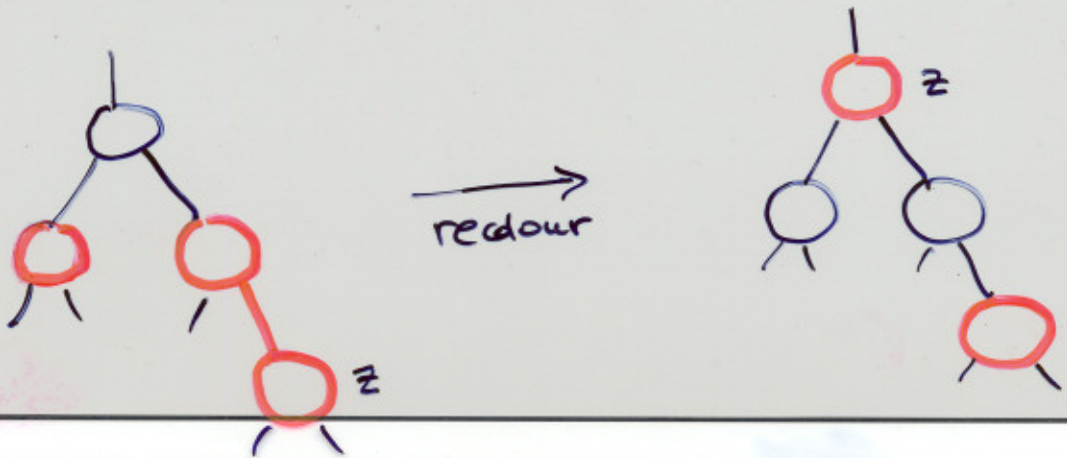
Case I z's uncle is black and z is right child of right child.



Case II z's uncle is black and z is left child of right child

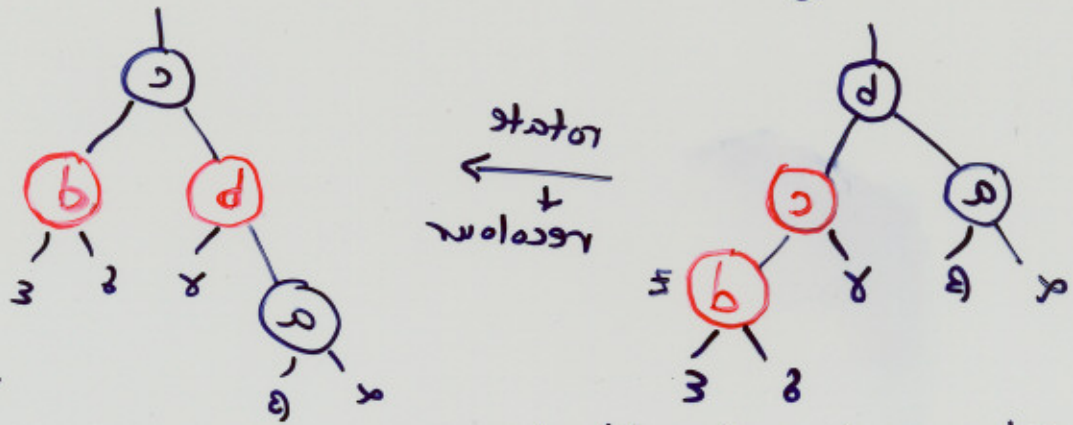


Case III z's uncle is red



Now possible violation higher up
→ repeat.

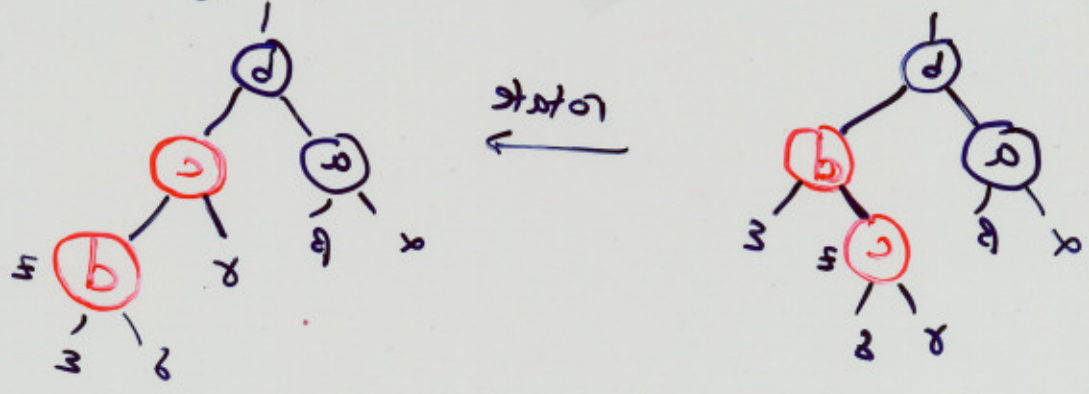
Case I
 M is right child of right child
 F's uncle is black and
 F is red child of red child.
 Fixing tree after insertion



DONE!

Case II

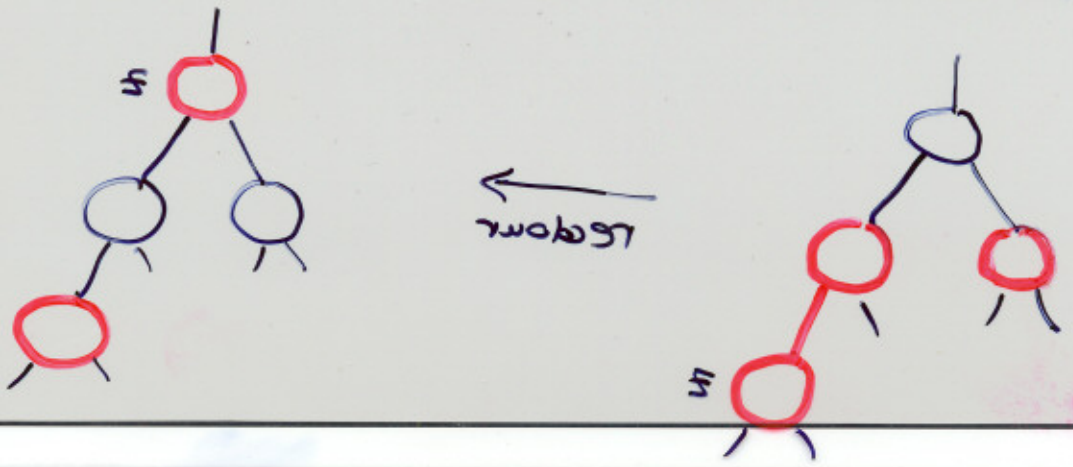
M is left child of right child
 F's uncle is black



Case I
 rotate

Case III

F's uncle is red



← repeat.
 Higher up
 Now possible violation