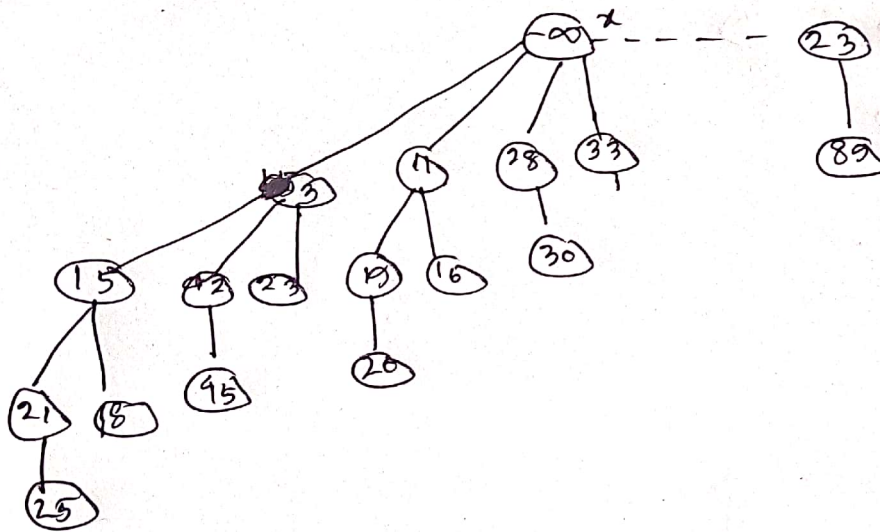


Q.1

First step -

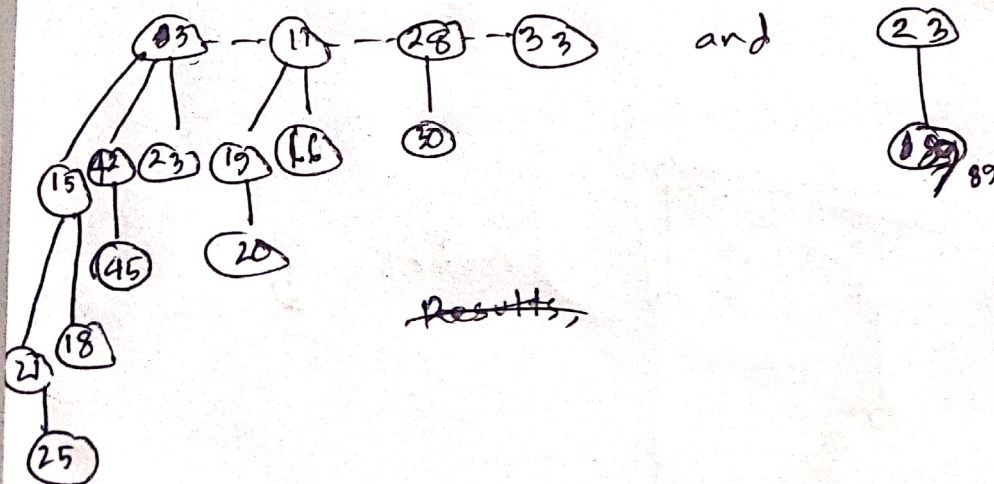
Decrease  $x$  to  $-\infty$  and bubble it up.



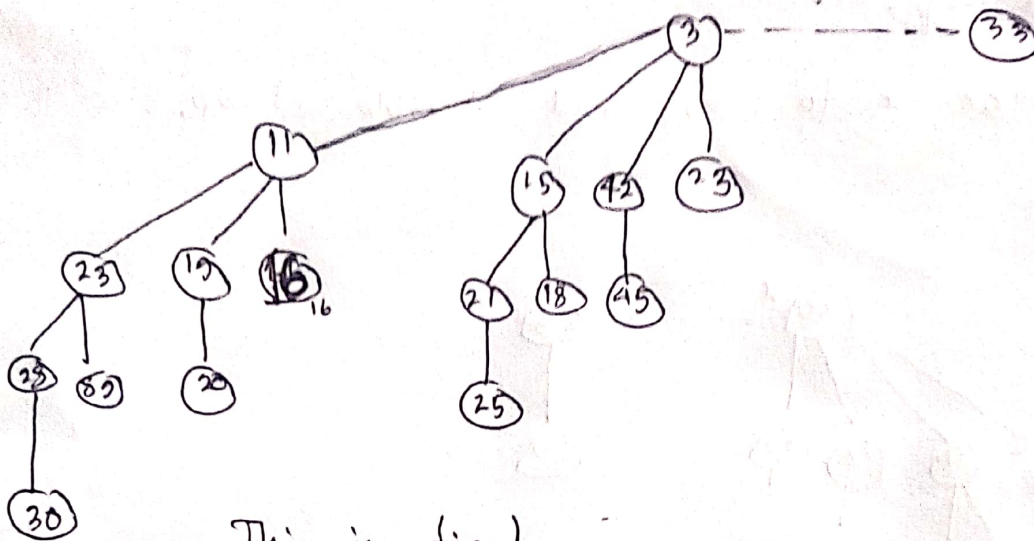
Second step:-

Extract min:-

Union between,



This union results,



This is final.

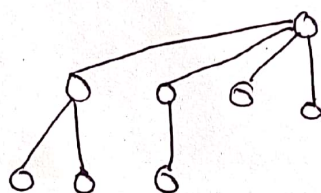
② We know,

$f_4$  :



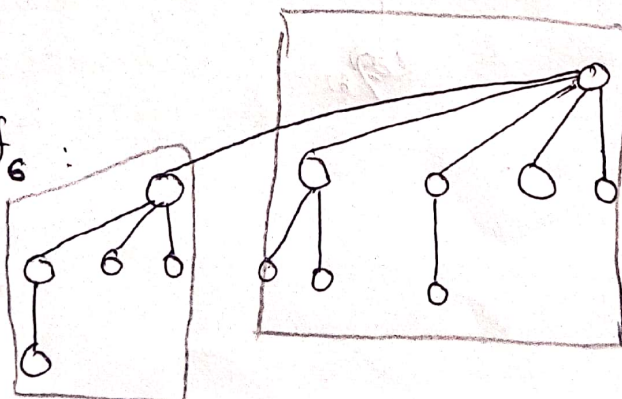
nodes = 5

$f_5$  :



nodes = 8

So,  $f_6$  :



nodes = 13

Because,  $f_6$  is ~~was~~ found by merging  $f_4$  and  $f_5$ .