

Date \_\_\_\_ / \_\_\_\_ / \_\_\_\_

Binomial Heap Decrease key ( $H, x, k$ )if  $k > \text{key}[x]$ 

then error "New key is greater than current key"

 $\text{key}[x] \leftarrow k$  $y \leftarrow x$  //  $y$  initially points to node  $x$  $z \leftarrow p[y]$ while  $z \neq \text{NULL} \ \& \ \text{key}[y] < \text{key}[z]$ do exchange  $\text{key}[y] \leftrightarrow \text{key}[z]$ If  $y$  and  $z$  have satellite fields

exchange them

 $y \leftarrow z$  $z \leftarrow p[y]$ After ensuring that new key  $\leq$  current key  
Assign new key  $\rightarrow x$ Delete ( $H, x$ ) :Binomial - Heap - Decrease key ( $H, x, -\infty$ )Binomial Heap Extract min  $H$ // Node  $x$  is made minimum key node by  
assigning  $-\infty$ . This is then remove  
by Extract min from