

10) Delete and decreaseKey :

(a) delete(H) :

```
Node * binomialHeapDelete (Node *h, int val) {
    if (h == NULL)
        return NULL;
    decreaseKey(h, val, INT_MIN);
    return ExtractMinBHeap(h);
}
```

(b) decreaseKey(H) :

```
void decreaseKey(Node *H, int old_val, int new_val) {
    Node * node = findNode(H, old_val);
    if (node == NULL)
        return;
    node->val = new_val;
    Node * parent = node->parent;
    while (parent != NULL && node->val < parent->val) {
        swap(node->val, parent->val);
        node = parent;
        parent = parent->parent;
    }
}
```

(c) Node* findNode(Node *h, int val) {

```
    if (h == NULL) return NULL;
    if (h->val == val) return h;
    Node * res = findNode(h->child, val);
    if (res != NULL) return res;
    return findNode(h->sibling, val);
}
```