

```

1) int maximum () {
    TNode *bantu;
    int maks;
    if (isEmpty()) {
        return 0;
    }
    else {
        maks = head->data;
        bantu = head->next;
        while (bantu != NULL) {
            if (bantu->data > maks) maks = bantu->data;
            bantu = bantu->next;
        }
        return maks;
    }
}

```

2) $A(1,4) = A(0, A(1,3))$	Kondisi 3
$= A(0, A(0, A(1,2)))$	Kondisi 3
$= A(0, A(0, A(0, A(1,1))))$	Kondisi 3
$= A(0, A(0, A(0, A(0, A(1,0)))))$	Kondisi 3
$= A(0, A(0, A(0, A(0, A(0,1)))))$	Kondisi 2
$= A(0, A(0, A(0, A(0,2))))$	Kondisi 1
$= A(0, A(0, A(0,3)))$	Kondisi 1
$= A(0, A(0,4))$	Kondisi 1
$= A(0,5)$	Kondisi 1
$= 6$	Kondisi 1

nilai akhir $A(1,4)$ adalah 6


```

3) typedef struct {
    int data;
    int height;
} heightnode;

/* TopViewPopulate prosedur untuk memberikan kordinat pada masing-masing Node */
void topViewPopulate (struct node * root, int h, int y, heightnode * m[1000]) {
    if (root == NULL) return;

    int index = y % 1000;
    if (index < 0) index += 1000;

    if (m[index] == NULL or m[index] -> height > h) {
        heightnode * hn = malloc (size of (heightnode));
        hn -> data = root -> data;
        hn -> height = h;
        m[index] = hn;
    }

    topViewPopulate (root -> left, h+1, y-1, m);
    topViewPopulate (root -> right, h+1, y+1, m);
}

```

```

void topView (struct node * root) {
    heightnode * m[1000];
    for (int i = 0; i < 1000; i++) {
        m[i] = NULL;
    }

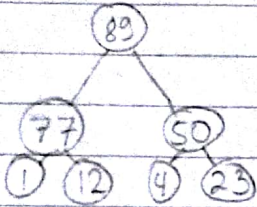
    topViewPopulate (root, 0, 0, m);
    for (int i = -500; i < 500; i++) {
        int index = i % 1000;
        if (index < 0) {
            index += 1000;
        }

        if (m[index] != NULL) {
            printf ("%d ", m[index] -> data);
        }
    }

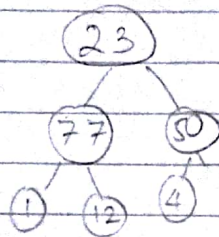
    printf ("\n");
}

```

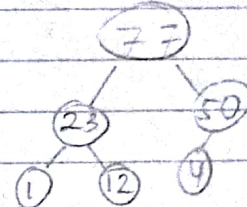

4)



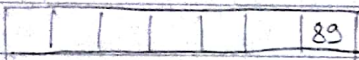
remove(89)
=>



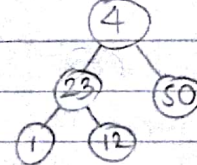
Heapify
=>



Array Sort

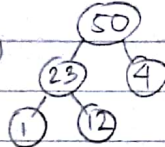


remove(77)



Heapify
=<

remove(50)



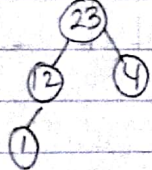
Array Sort



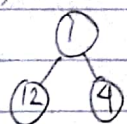
Array sort



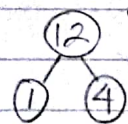
Heapify



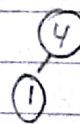
remove(23)



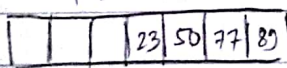
Heapify
=>



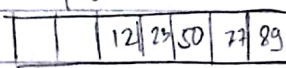
remove(12)



Array Sort



Array Sort

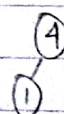


Heapify

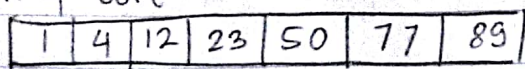
remove(1)



remove(4)



Array Sort



Array sort

