Calculating Height of Binary Trees:

```
class Node {
  constructor(val) {
    this.val = val;
    this.left = null;
    this.right = null;
  }
}

const a = new Node("a");
const b = new Node("b");
const c = new Node("c");
const d = new Node("d");
const e = new Node("e");
const f = new Node("f");

a.left = b;
a.right = c;
b.left = d;
b.right = e;
c.right = f;

const one = new Node(1);
const two = new Node(2);
const three = new Node(3);
const four = new Node(4);
const five = new Node(5);
const six = new Node(6);
const seven = new Node(7);
const eight = new Node(8);

one.left = two;
one.right = three;
two.right = five;
two.left = four;
five.right = seven;
five.left = six;
seven.left = eight;

const maxHeight = (root) => {
  if (!root) return 0;

  return Math.max(maxHeight(root.left), maxHeight(root.right)) + 1;
};

console.log(maxHeight(a));
console.log(maxHeight(one));
```

Finding Middle of Linked Lists:

```
class Node {
  constructor(data) {
    this.data = data;
    this.next = null;
  }
}

class LinkedList {
  constructor(data) {
    this.head = null;
  }
  addFirst(data) {
    const newNode = new Node(data);
    newNode.next = this.head;
    this.head = newNode;
  }
  print() {
    let current = this.head;
    let output = "";

    while (current) {
      output += current.data + " "; // Append each data element and a space to the output
string
      current = current.next;
    }

    console.log(output.trim()); // Log the output string and trim any trailing space
  }
  size() {
    let current = this.head;

    let count = 0;
    while (current) {
      current = current.next;
      count++;
    }
    return count;
  }
  middleChild() {
    let current = this.head;
    let forward = this.head.next;
    while (forward && forward.next) {
      current = current.next;
      forward = forward.next.next;
    }
    if (this.size() % 2 === 0) {
      return current.next.data;
    } else {
      return current.data;
    }
```

```
  }
}

const linkedlist = new LinkedList();

linkedlist.addFirst(3);
linkedlist.addFirst(13);
linkedlist.addFirst(8);
linkedlist.addFirst(5);
linkedlist.addFirst(15);
linkedlist.addFirst(25);
linkedlist.print();

console.log(linkedlist.middleChild());
```