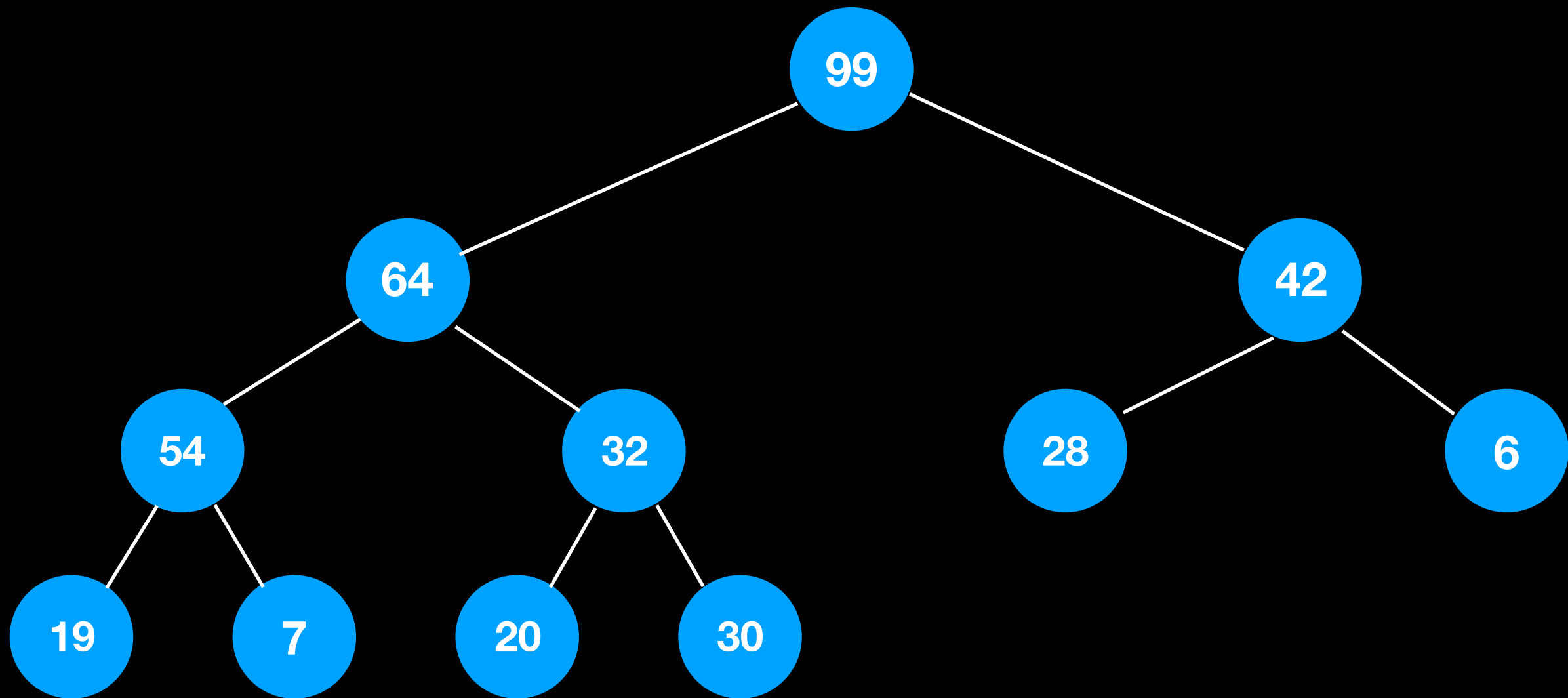


Heap

max Heap - 정의

- 완전 이진 트리
- 부모의 값이 자식의 값보다 크다

max Heap - 정의



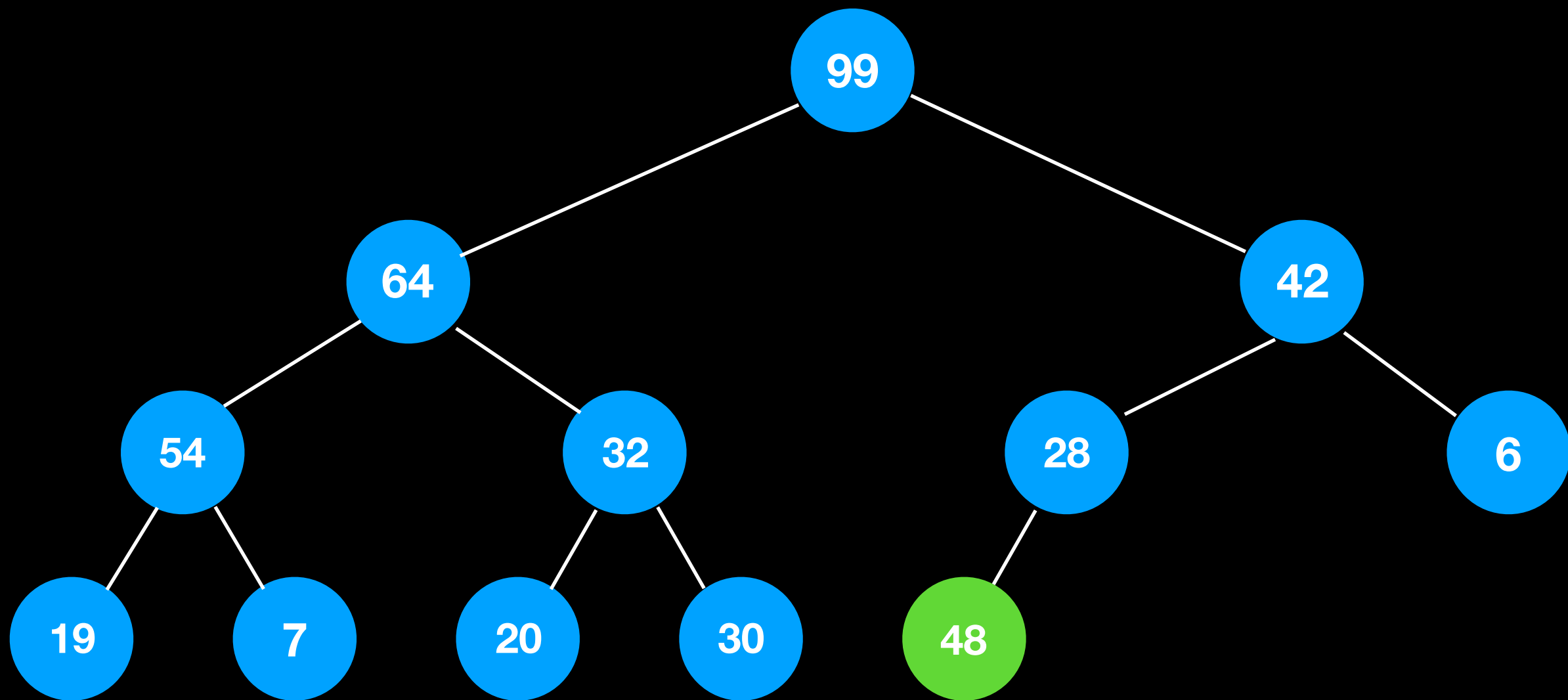
역할(max heap)

- `push(x)`: 힙에 `x`를 넣는다
- `pop()`: 힙에서 최대값을 제거한다
- `top()`: 힙에서 최대값을 참조한다.

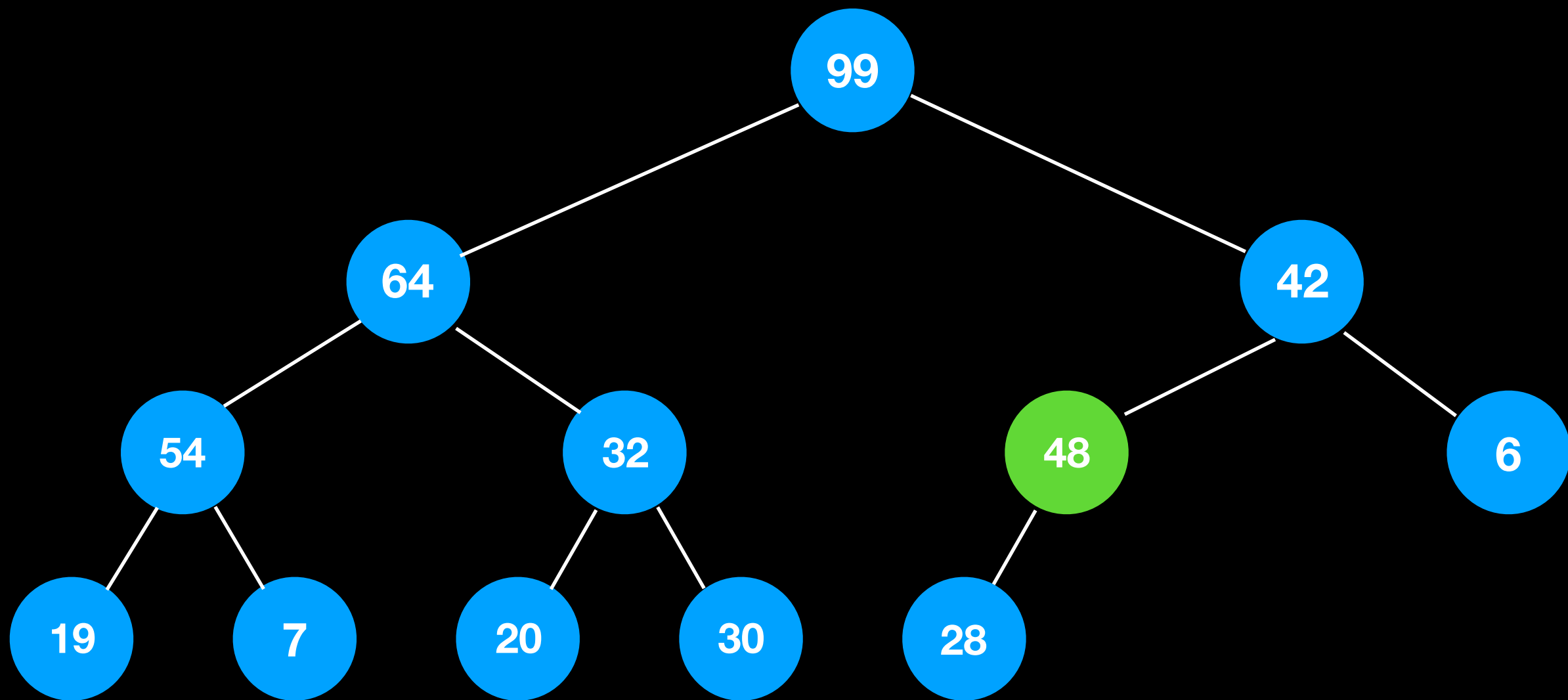
예제

- push(5)
- push(7)
- push(3)
- pop() ==> 7 제거
- push(4)
- pop() ==> 5 제거

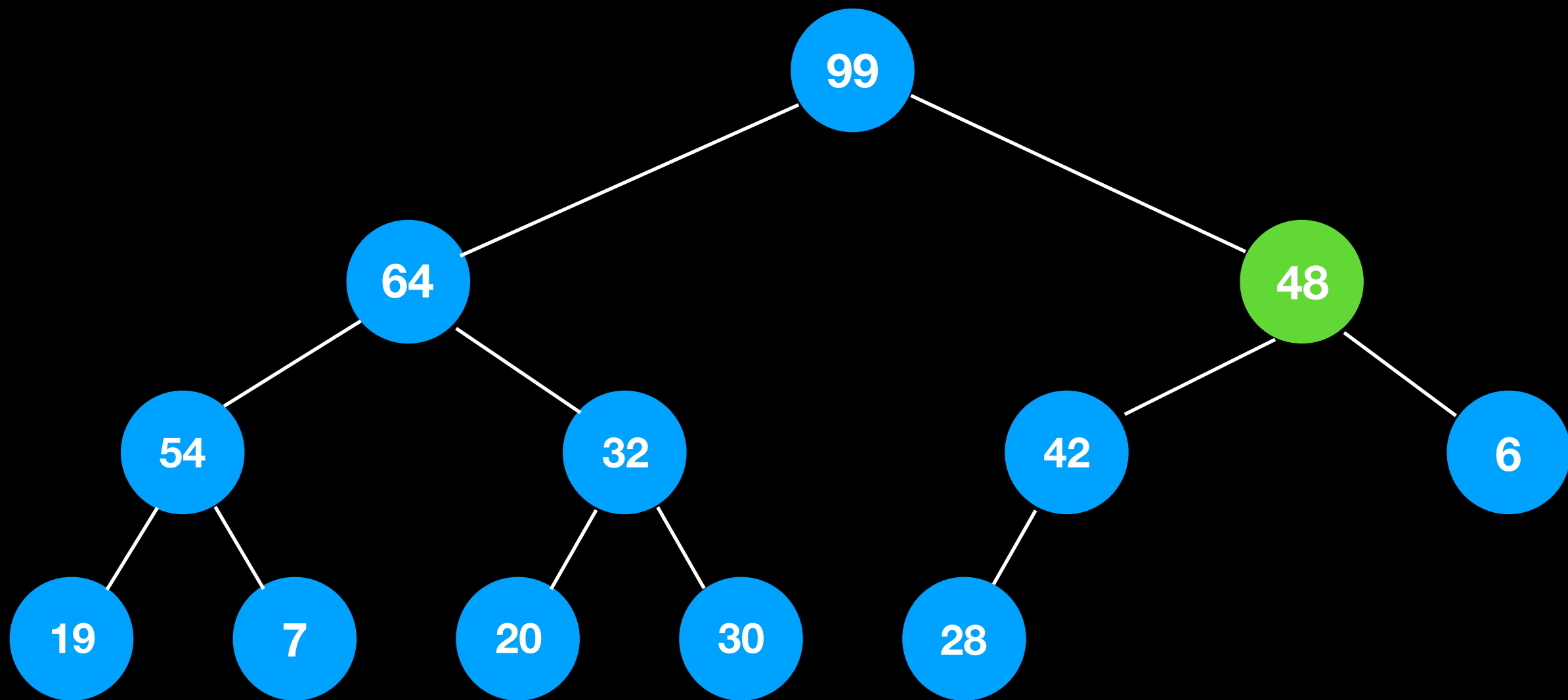
max Heap - push



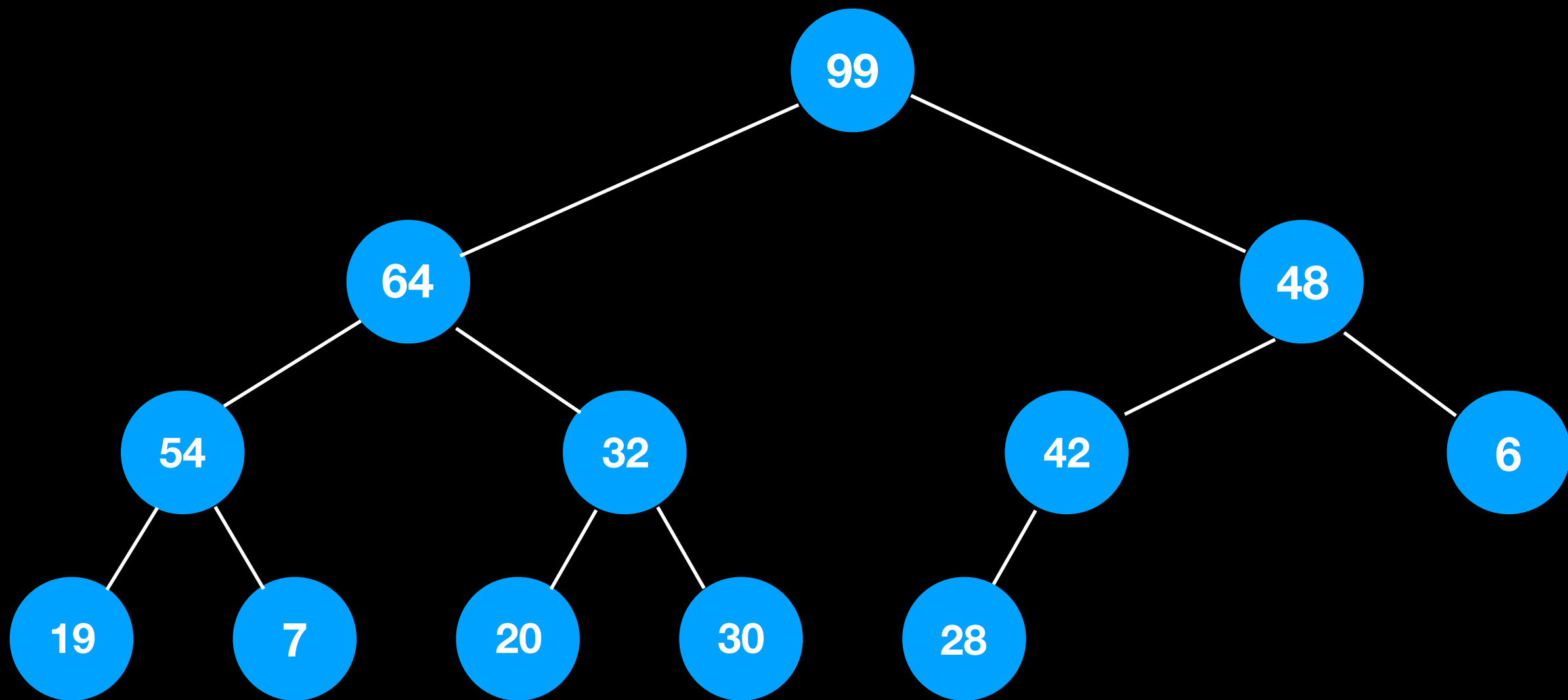
max Heap - push



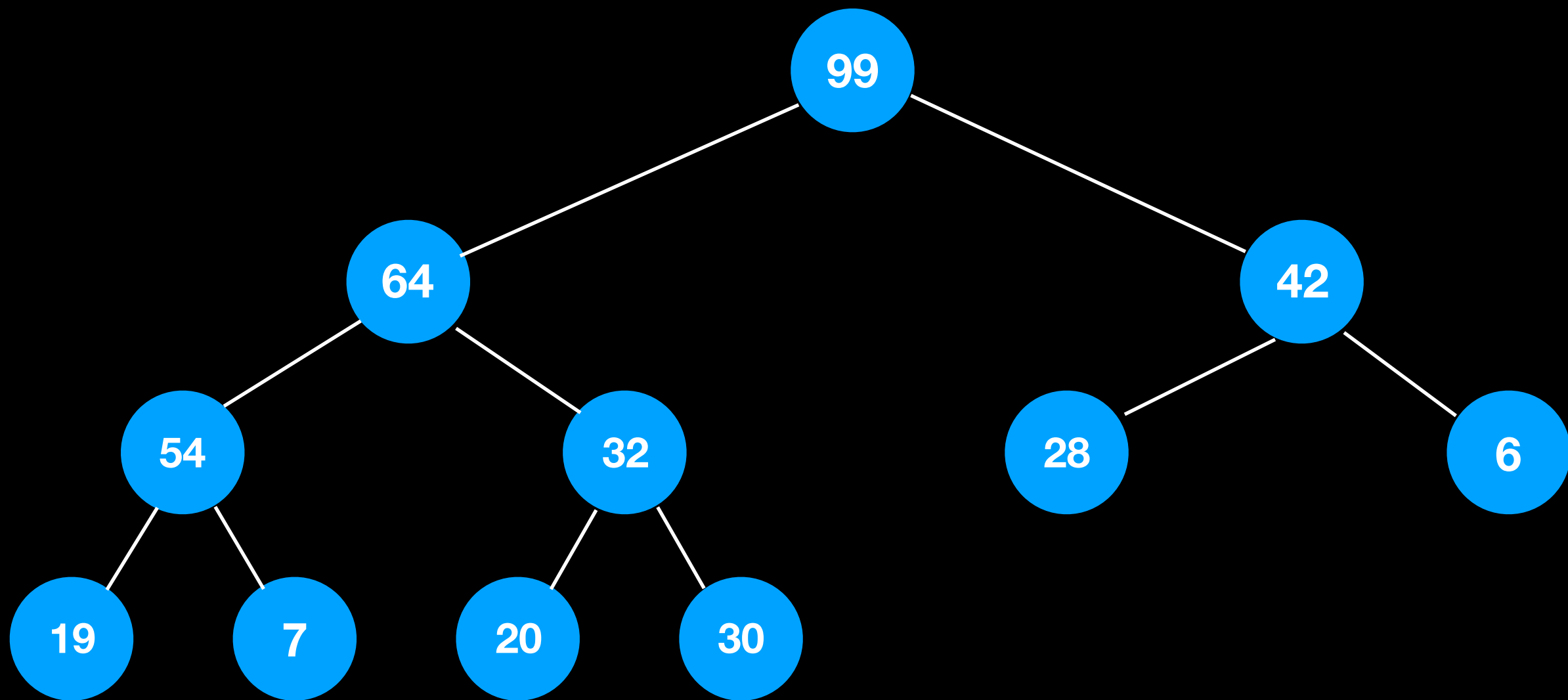
max Heap - push



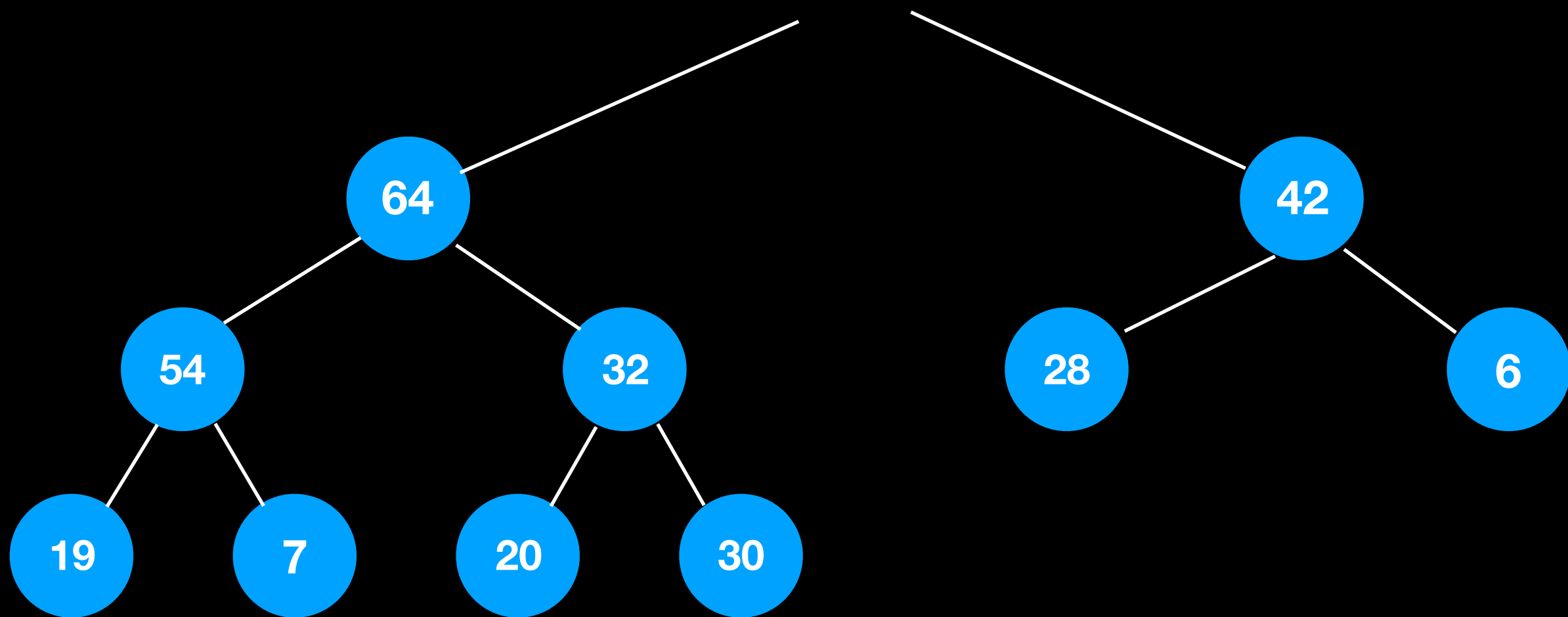
max Heap - push



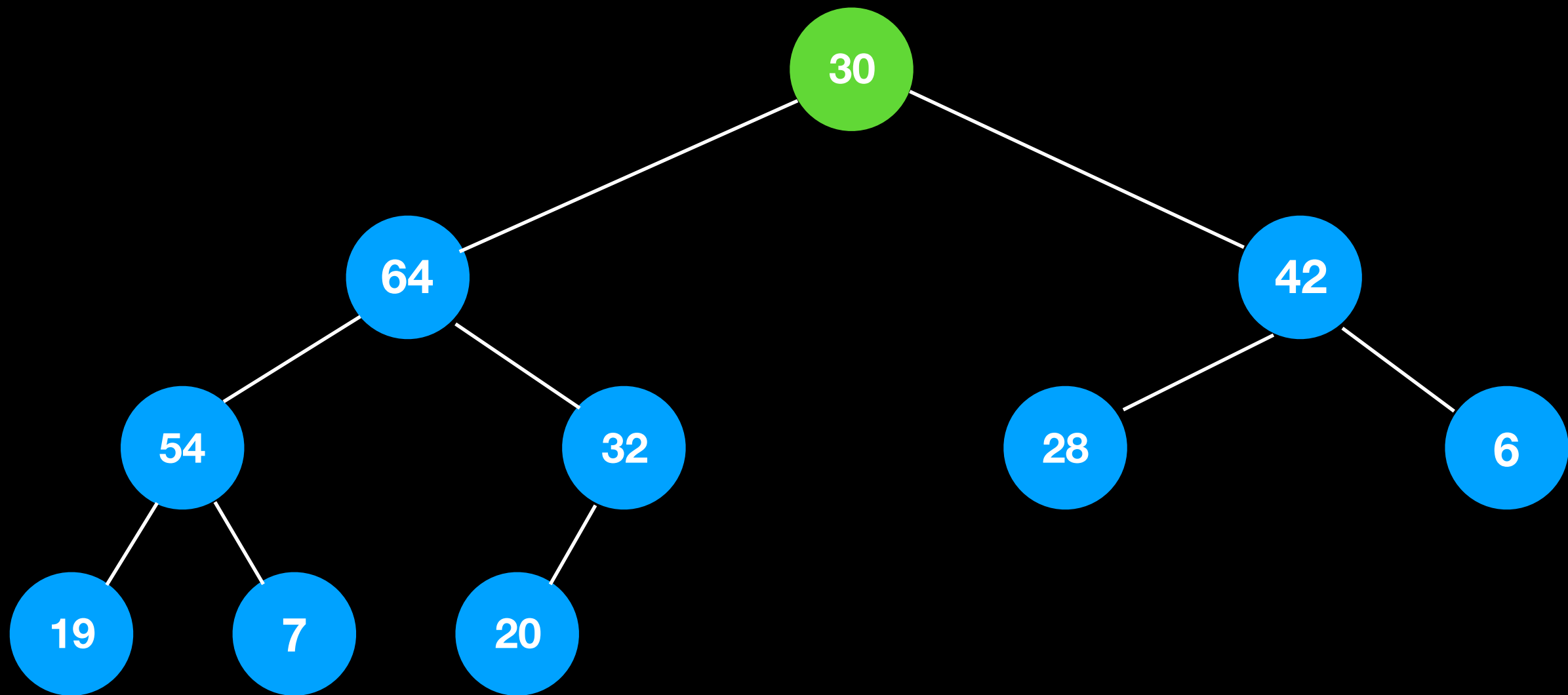
max Heap - pop



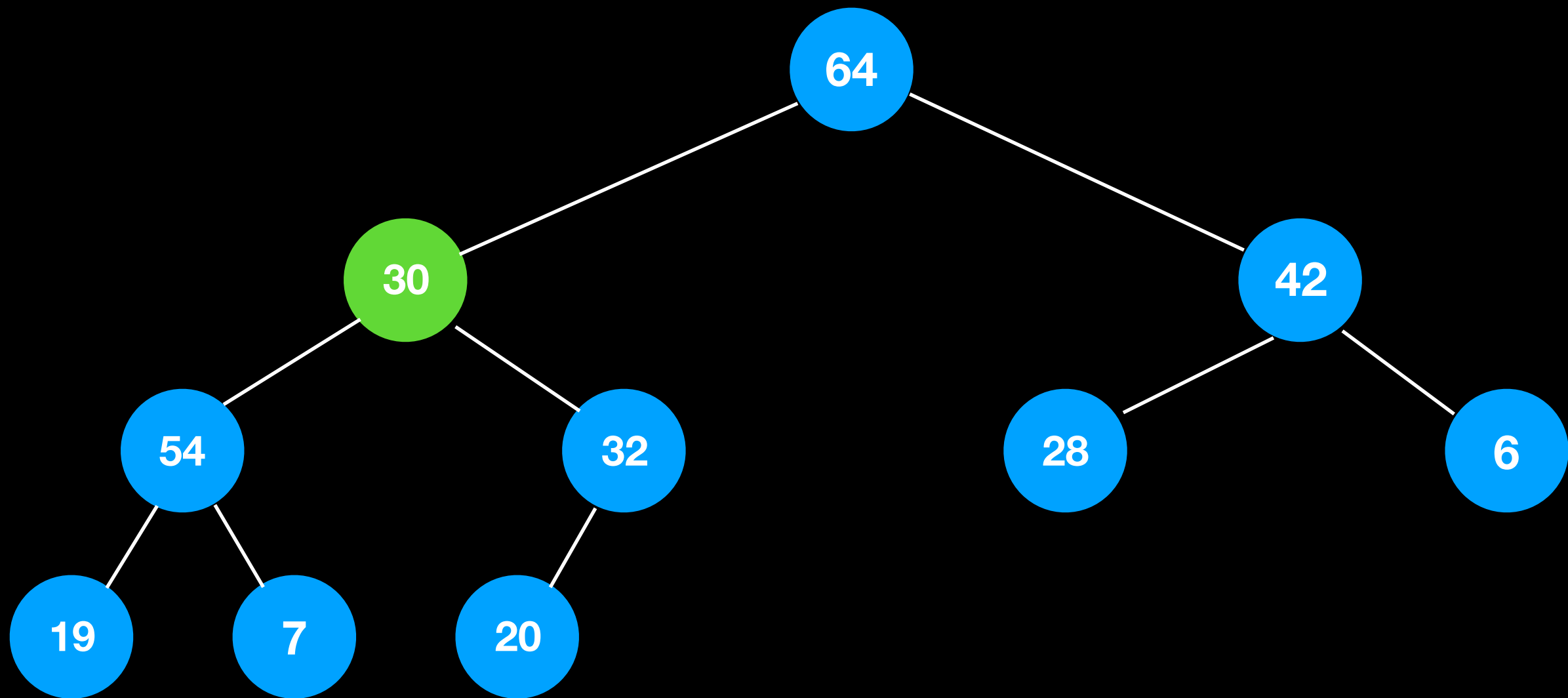
max Heap - pop



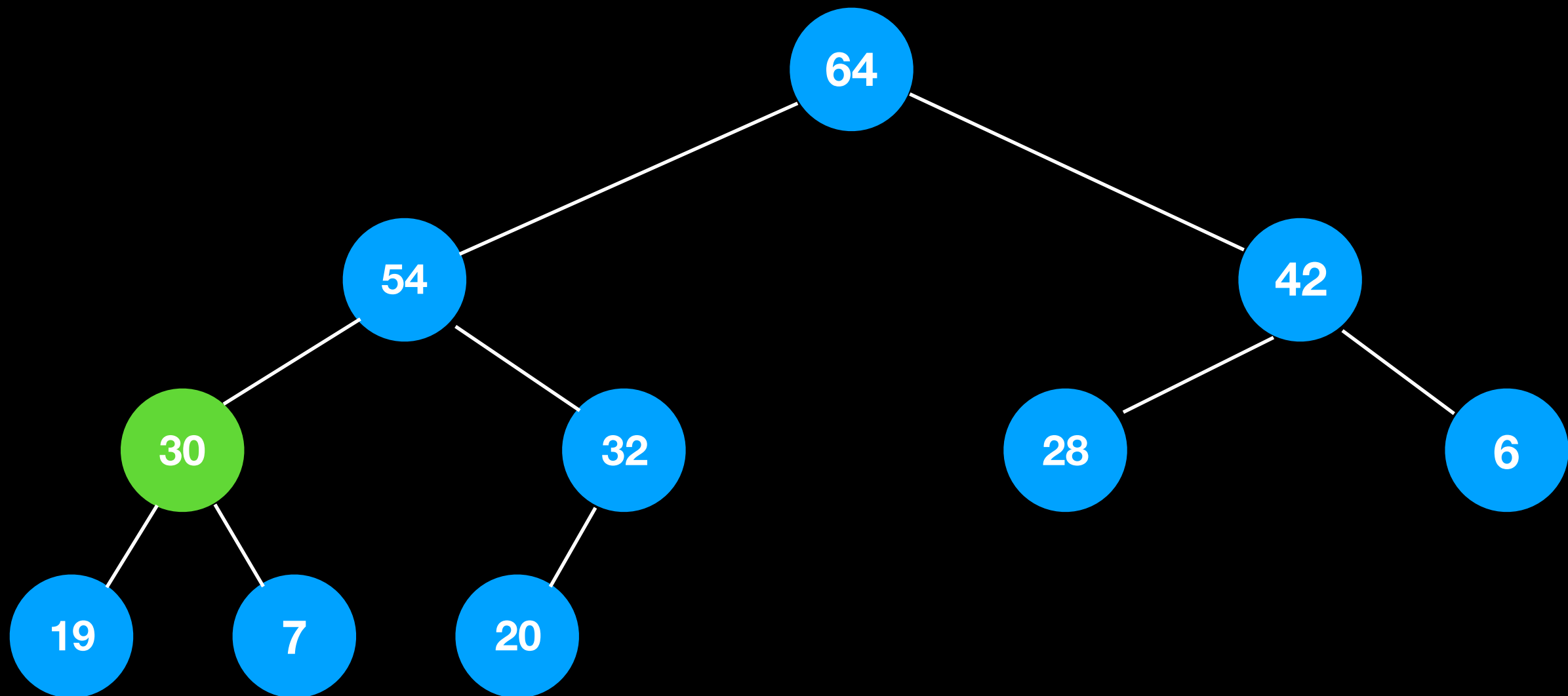
max Heap - pop



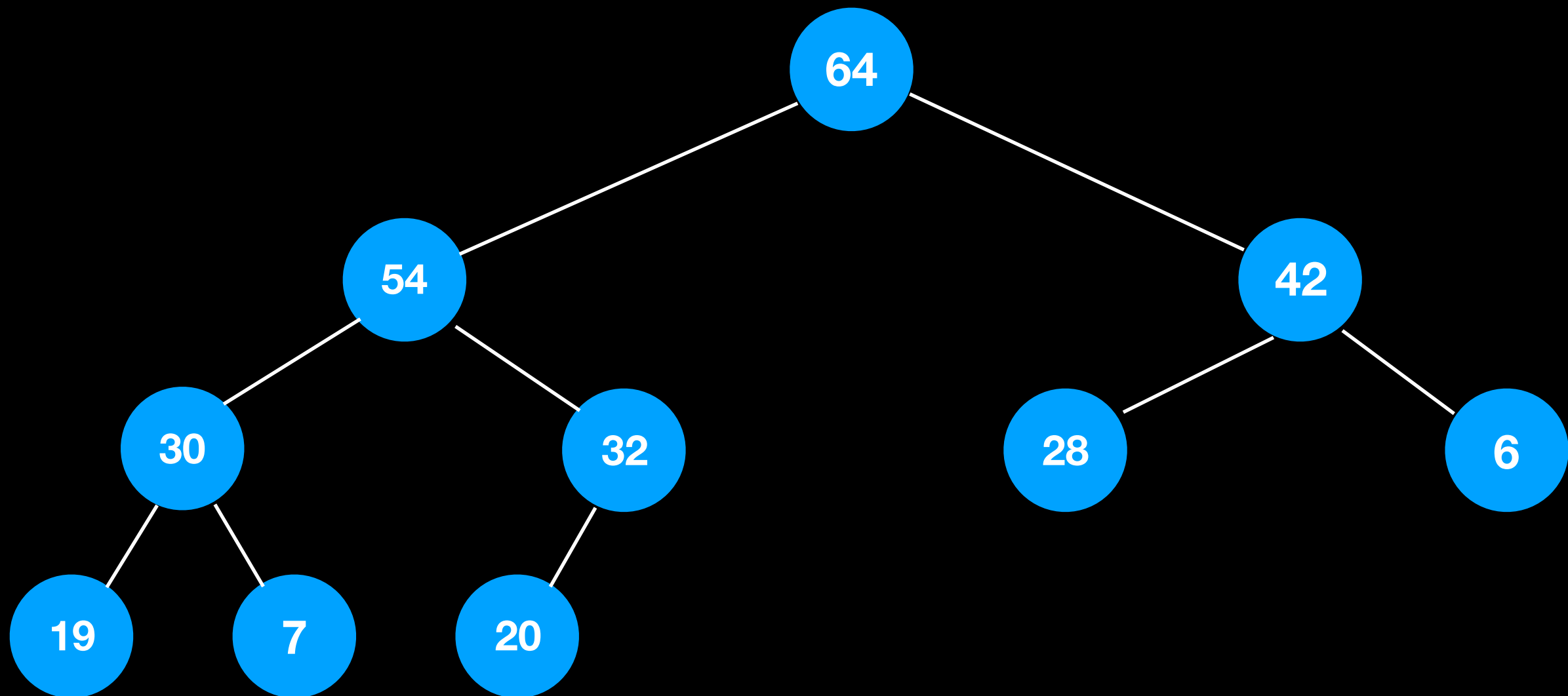
max Heap - pop



max Heap - pop



max Heap - pop



구현(java)

min_heap이 기본이다.

```
PriorityQueue<Integer> que = new PriorityQueue<Integer>()
```

```
que.add(3); // push
```

```
que.peek(); // top
```

```
que.poll(); // pop
```


구현(C++)

C++에서는 max_heap이 기본이다.

```
priority_queue<int> que;  
que.push(3);  
que.top();  
que.pop();
```