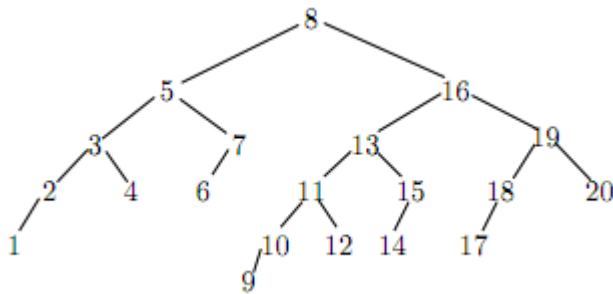


Section Week 5 Worksheet

1) Hash Tables. Consider a hash table of size 7 where hashing function is $h(\text{key})\%7$. Insert the following in order, according to the type of hash table below: 14, 10, 17, 4, 12, 13, 24

- Show a chaining hash table
- Show a hash table using open addressing with linear probing.
- Show a hash table using open addressing with quadratic probing.

2) AVL Trees. We haven't talked much about AVL deletion in this class, because it's a bit more complicated than inserts. Let's take a look at this example to see why. Find one key that we can delete so that the rebalancing phase requires two separate rebalancing acts (either a single- or double-rotation)? Note that a double-rotation counts as one, not two, rebalancing acts.



3) B-Trees: (unfinished example from last time)

- Insert the following into an empty B tree with $M=3$ and $L=3$: 12, 24, 36, 17, 18, 5, 22, 20.
- Delete 17, 12, 22, 5 & 3