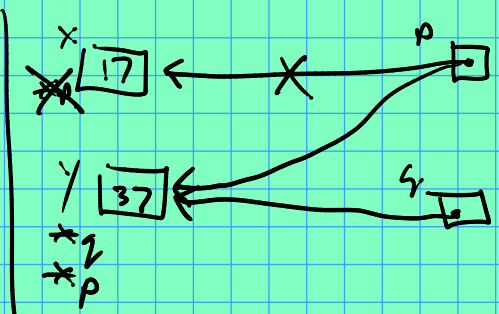
```
int x;
x = 17;
int y;
y = 37;
int* p;
p = &x;
int** q = &y;
p = q;
```

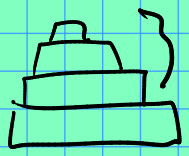


`&p` (type `int**`)

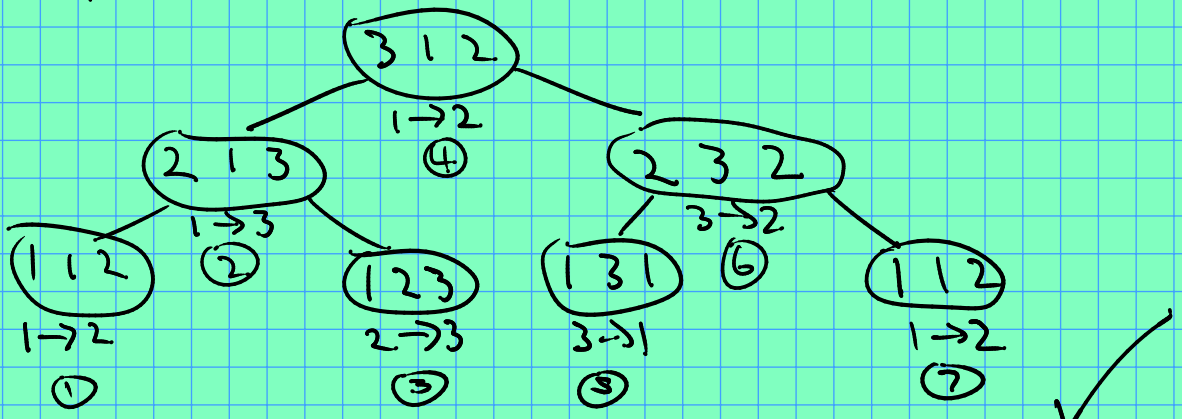
`&q` (" ")

```
int* A = new int[1000000];
A = 0;
// if you're paranoid, maybe look
// at valgrind or other profiling tools
```

```
towers(n, s, e) {
    if (n==0) return;
    towers(n-1, s, 6-s-e);
    cout << "move 1 from " << s << " to " << e << "\n";
    towers(n-1, 6-s-e, e);
}
```

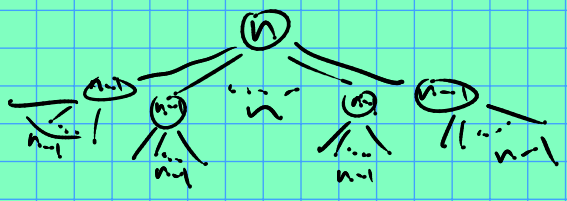


Example trace:



✓

Computing permutations:



Why do we need copy const. & assignment (& destructor) for classes w/ dynamic memory?

destructor – should be obvious – free dynamically allocated memory once object goes out of scope.

copy const. & assignment: make sure there is a 1-1 correspondence between dynamic allocations & objects (so no two objects share memory).

Note: default behavior (member-wise assignment) does <u>not</u> have this property