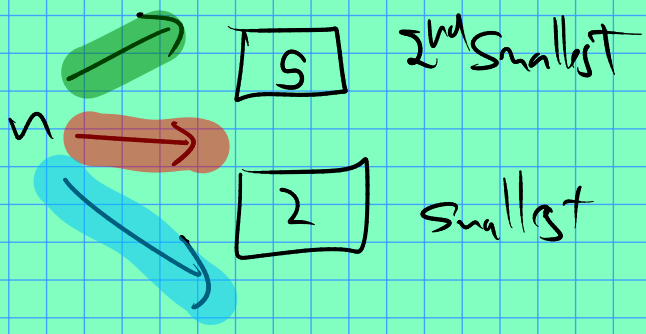
Review for Midterm

2nd Smallest:

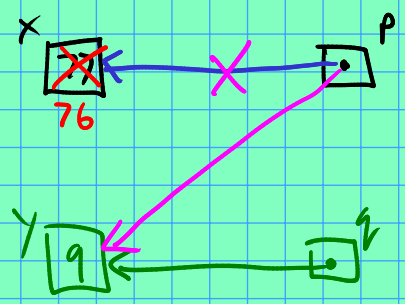


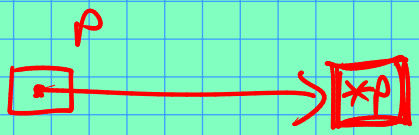
How to update upon seeing a new # n?

```
if (n > 2nd Smallest)
    // nothing to do...
else if (smallest < n && n < 2nd Smallest)
    // 2nd smallest = n
else if (n < smallest)
    // 2nd smallest = smallest
    // smallest = n
```

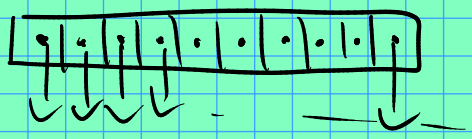
Pointers + Arrays

```
int x = 77;
int* p = &x;
(*p)--;
int y = 9;
int* q = &y;
p = q;
```





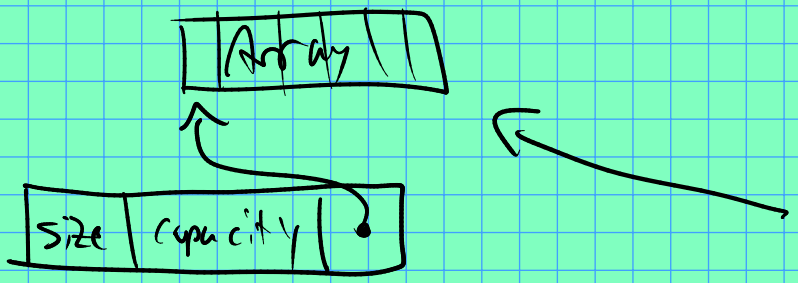
int* A[10];

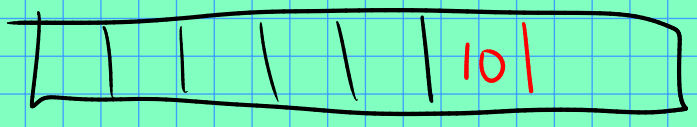


Array vs Vector

Array doesn't know its size

Array has no built in way to grow (like push_back)



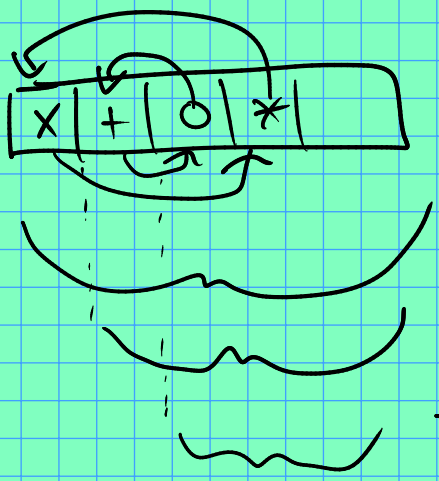


v[0] v[1] . . v[size-1] size++

v.push_back(10)

v.pop_back(); size--

10110011



(Permutations...)

1st

2nd

3rd ...