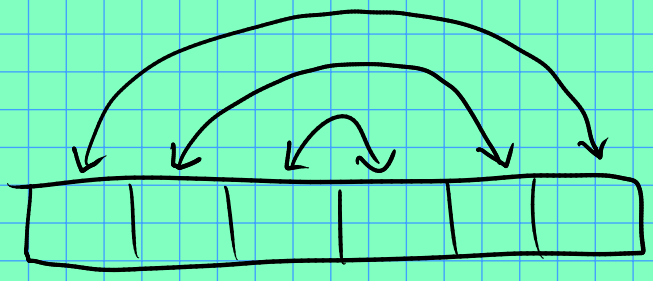
Exercise: Write a function to reverse the contents of a vector. Do this "in-place".

```
void reverse(vector<int>& v);
```

Say v.size() = n



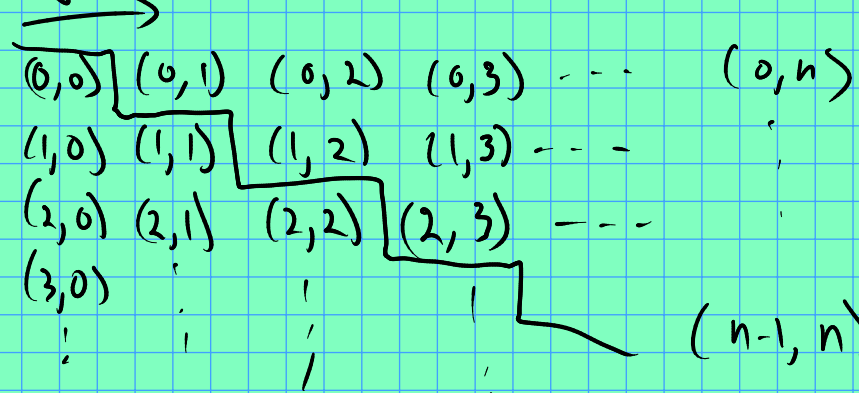
v[0] ⟷ v[n-1]
v[1] ⟷ v[n-2]
v[2] ⟷ v[n-3]
⋮
v[i] ⟷ v[n-1-i]

Note: "in-place" means "small" extra storage (does not depend on size of vector)

Exercise: Write a function that takes a vector v, and int t and returns a boolean indicating whether or not there exist indexes $i \neq j$ s.t. $v[i] + v[j] == t$.

One option is to just "brute force" it:

We could go through all pairs $0 \le i < j < n$ and check $v[i] + v[j] == t$.



Note: this takes a lot of steps: $\approx n^2/2$

Bonus question: can you solve this in much fewer steps?

if say, you knew the input was sorted?

$(i<j \Rightarrow V[i] \leq V[j])$