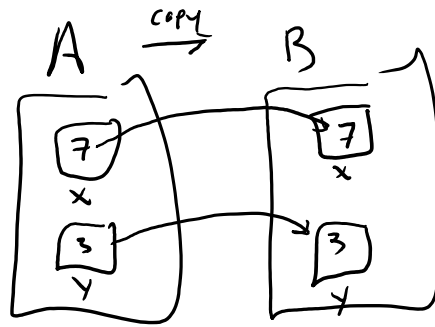
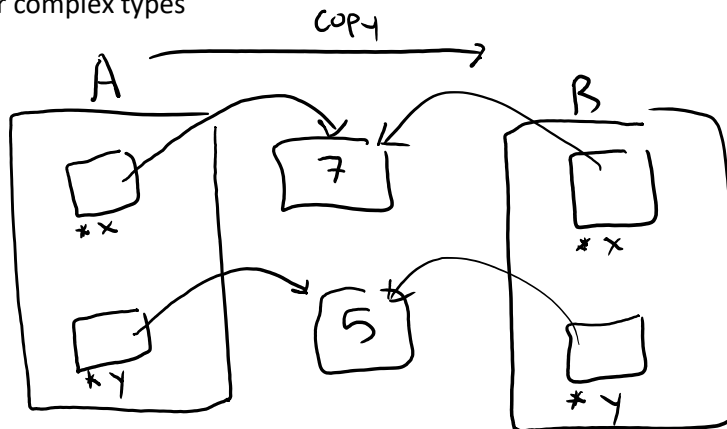


## Copy / Move Constructors

- Purpose: Make an exact replica of an existing
- All classes come with default versions of copy & move constructors
- Default:
  - Do a value copy of all member variables



- Default copy & move constructors work fine when all member variables are basic types. However, they do not work well when member variables are pointers or complex types

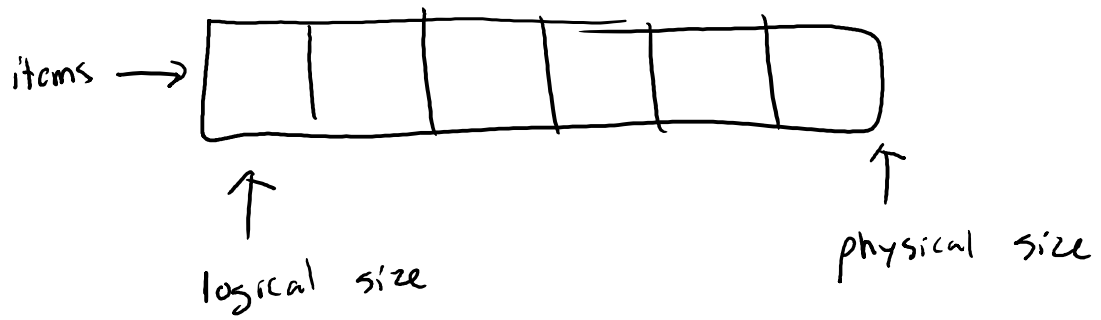


- The default copy on pointers results in a value copy of the pointer, which means that two classes will point to exactly the same data.
- Furthermore, one class' destructor call may deallocate dynamically allocated memory in another class. This almost always results in a runtime exception at some point in the program.

## Vector

- Diagram:

`vector<int> numbers {3};`



Time to resize a vector

