Pointers and Box-and-Arrow Diagrams

Question 1

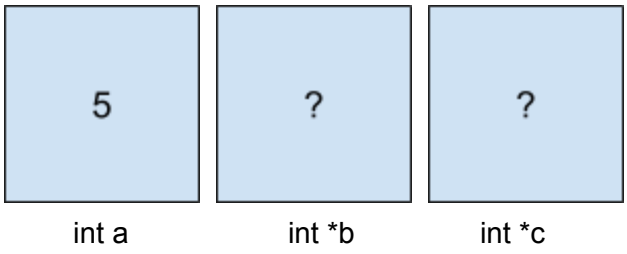
Passing an integer - the regular way to pass an integer as a parameter is by value which copies the integer and the changes made to it inside of the function are scoped to the function meaning they have no direct impact on the value that was passed in.

Passing a reference - when passing by reference to an integer we are explicitly saying that we are referring to the original integer variable and **not** a copy of it. Therefore any changes made within the function will be reflected on the integer outside of the function.

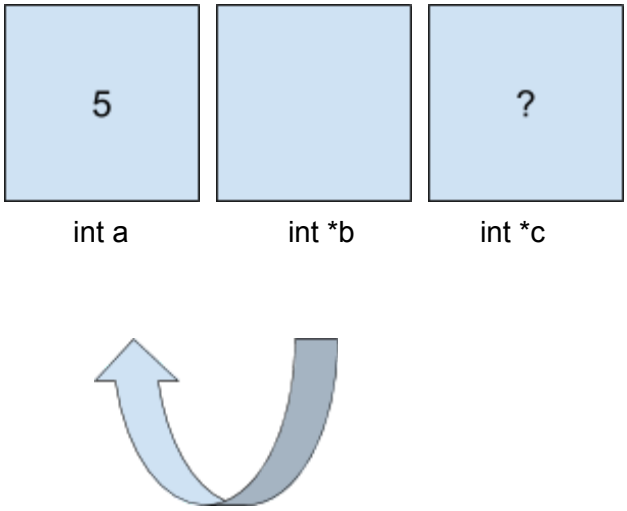
Passing by pointer - this is similar to passing by reference as you are passing a pointer to the memory location of the original integer variable. Again, any changes made to this parameter, i.e. dereferencing inside the function, will be reflected outside of it.

Question 2

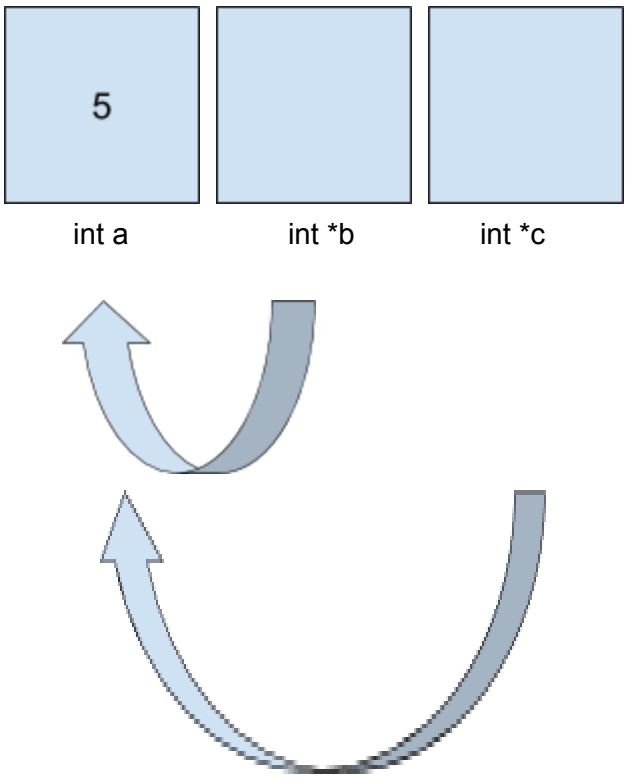
1. a = 5



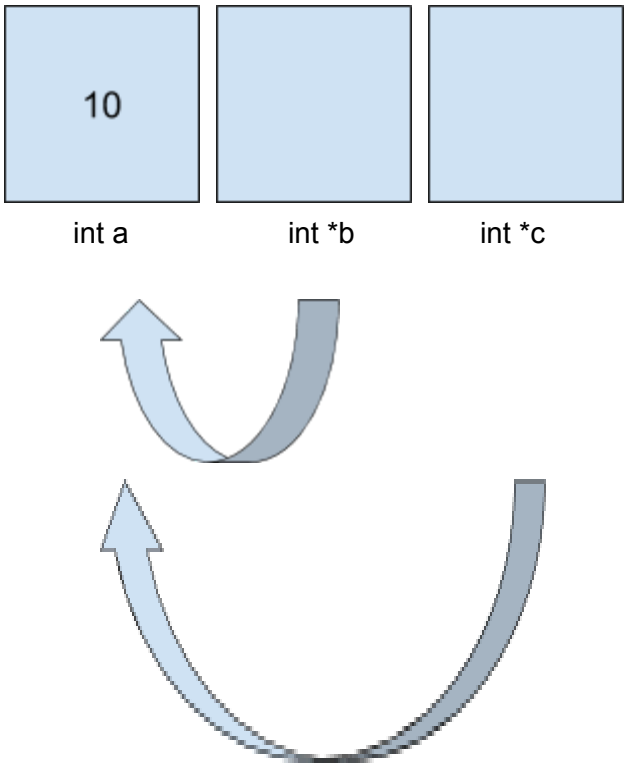
2. b = &a



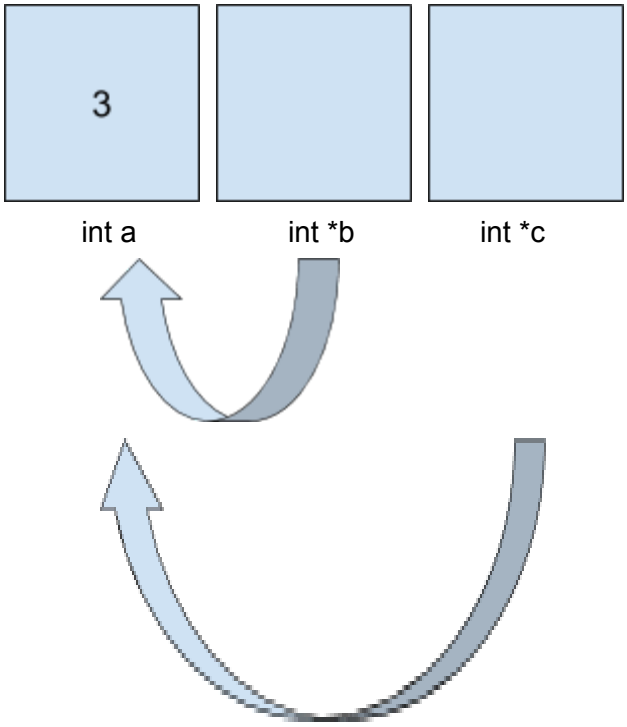
3. c = b



4. *c = 10

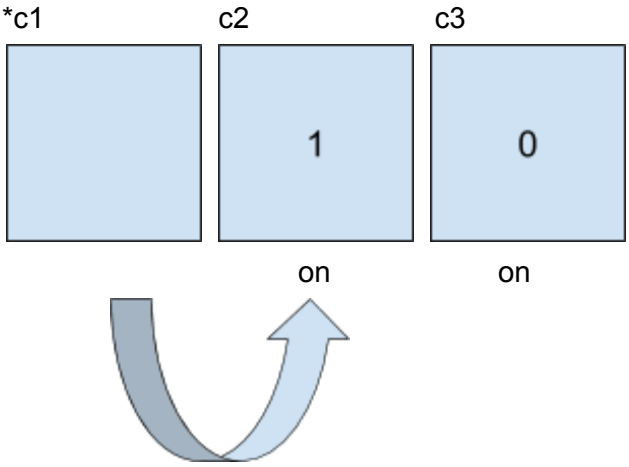


5. a = 3

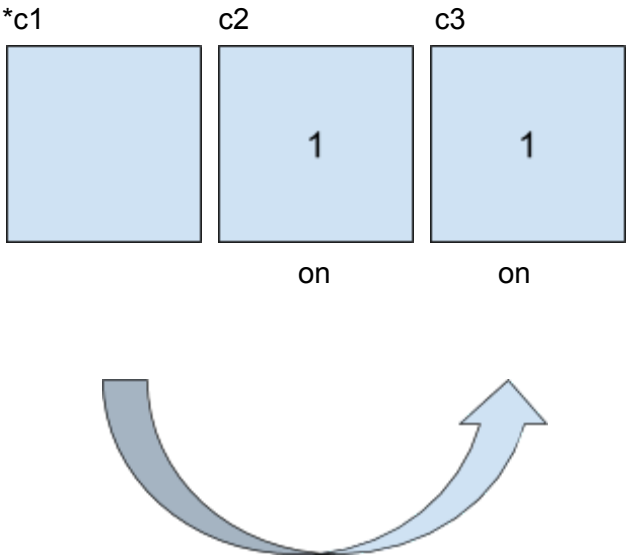


Question 3

1. c1 = &c2



2. c1 = &c3



3. c2.on = false