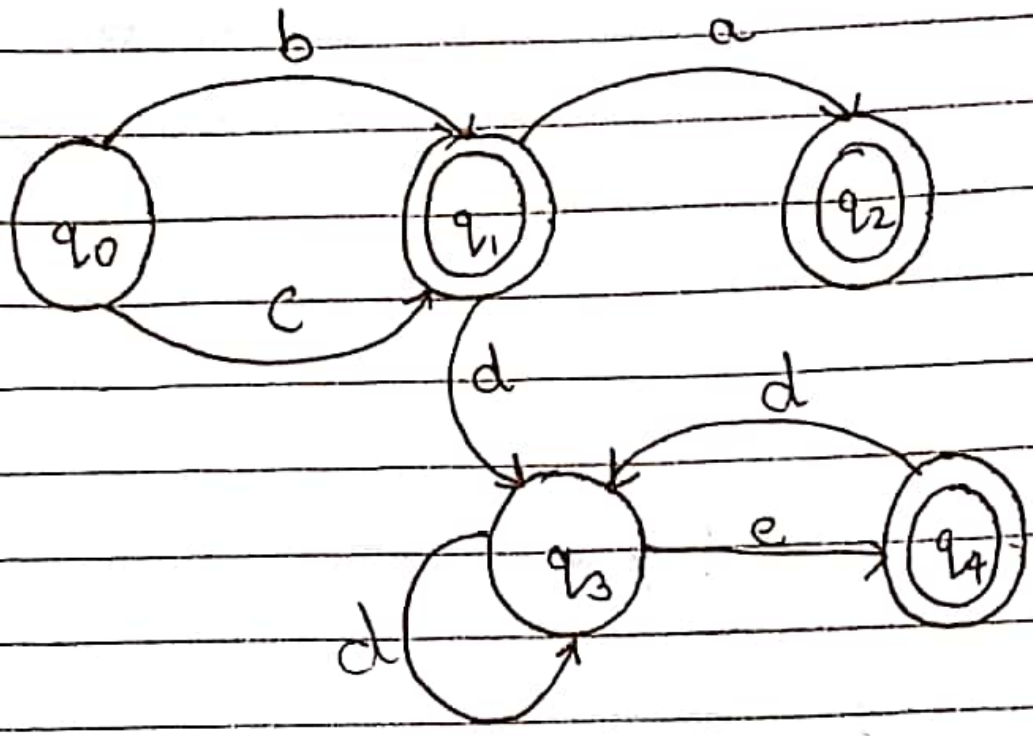
Ans:- 1) The regular expression that describes b is

$$[b^* ab(bb)^*]^+$$

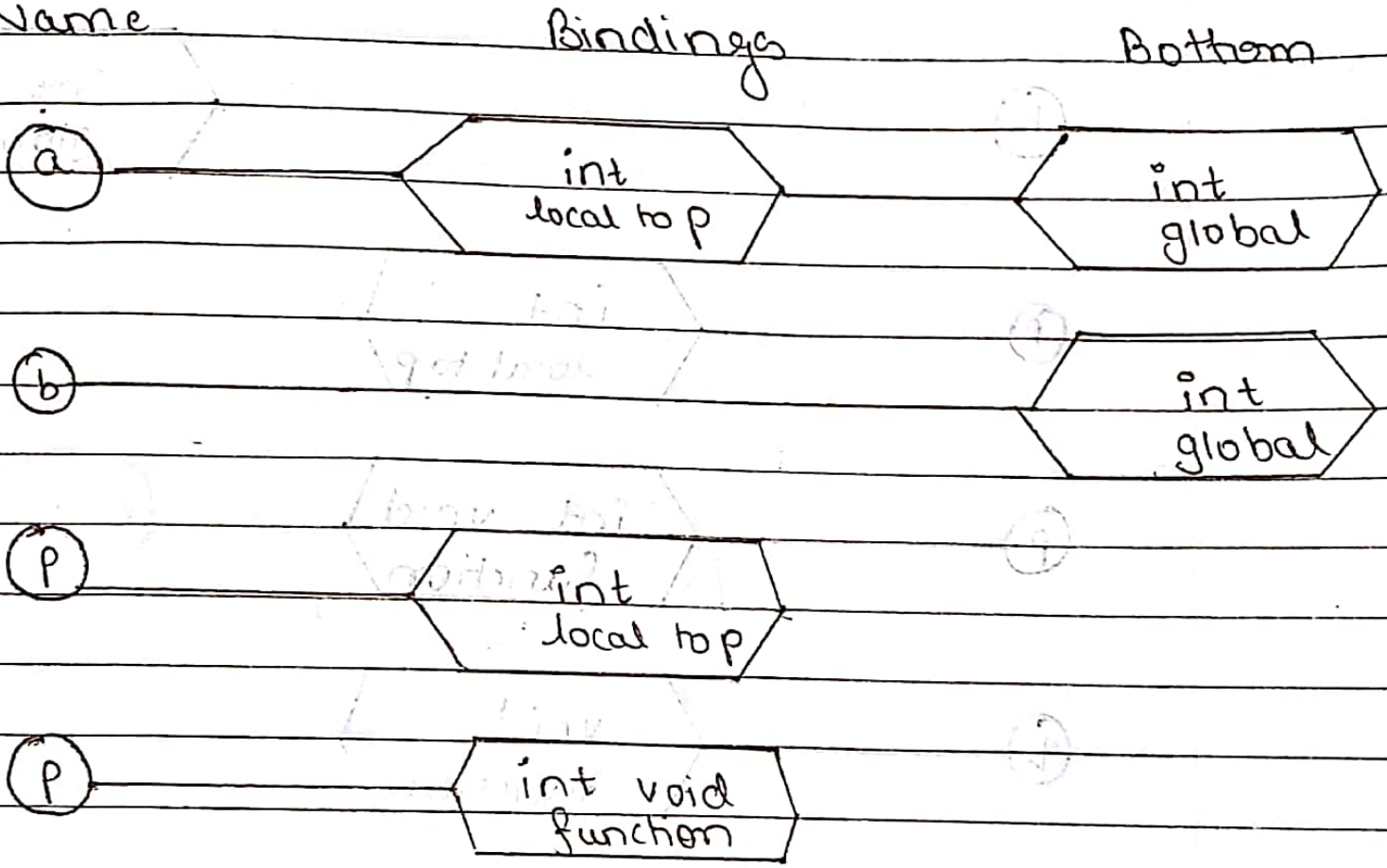
Ans 2)



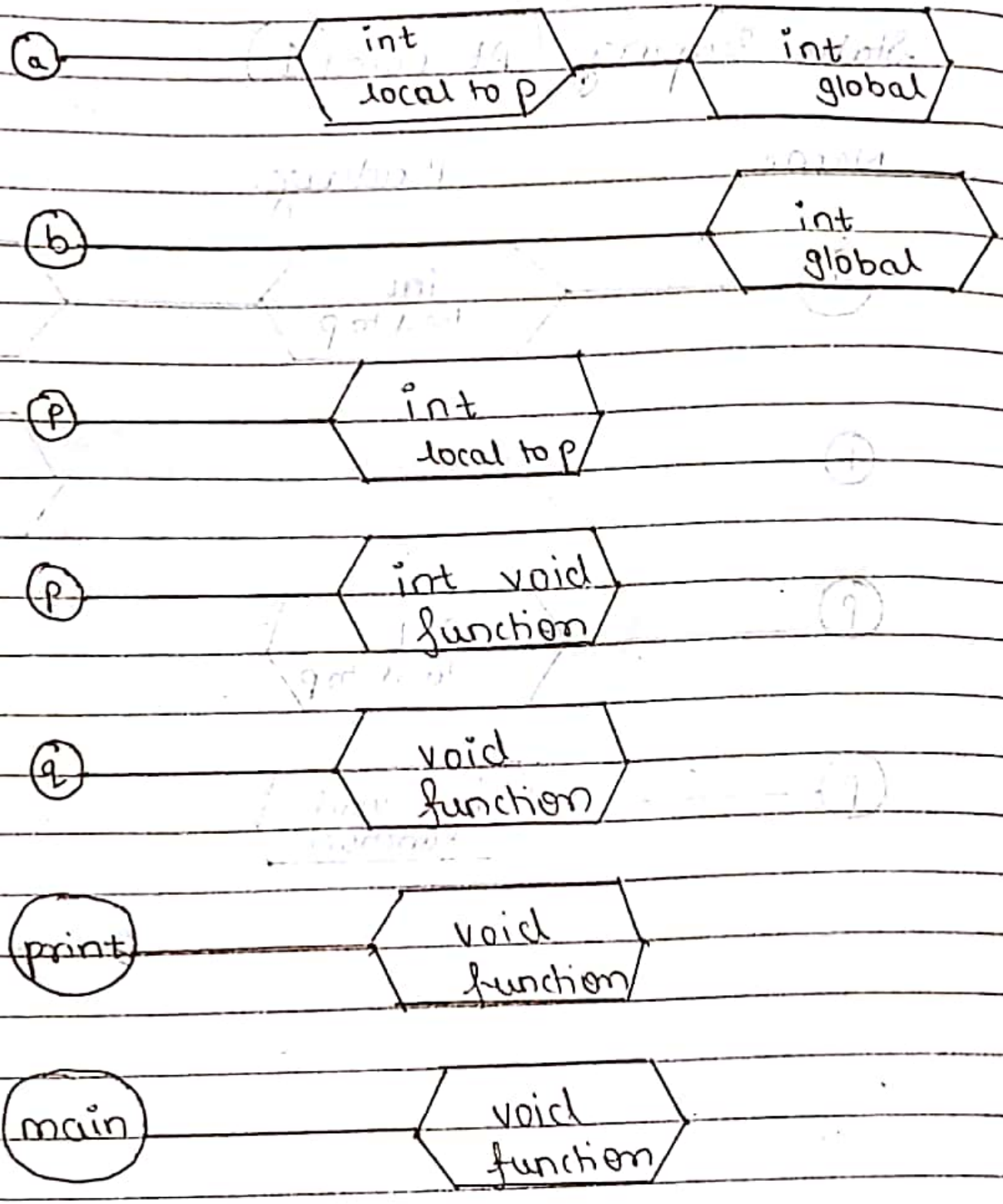
Answer :- 3

Symbol table at point 1

Static Scoping (At point 1)

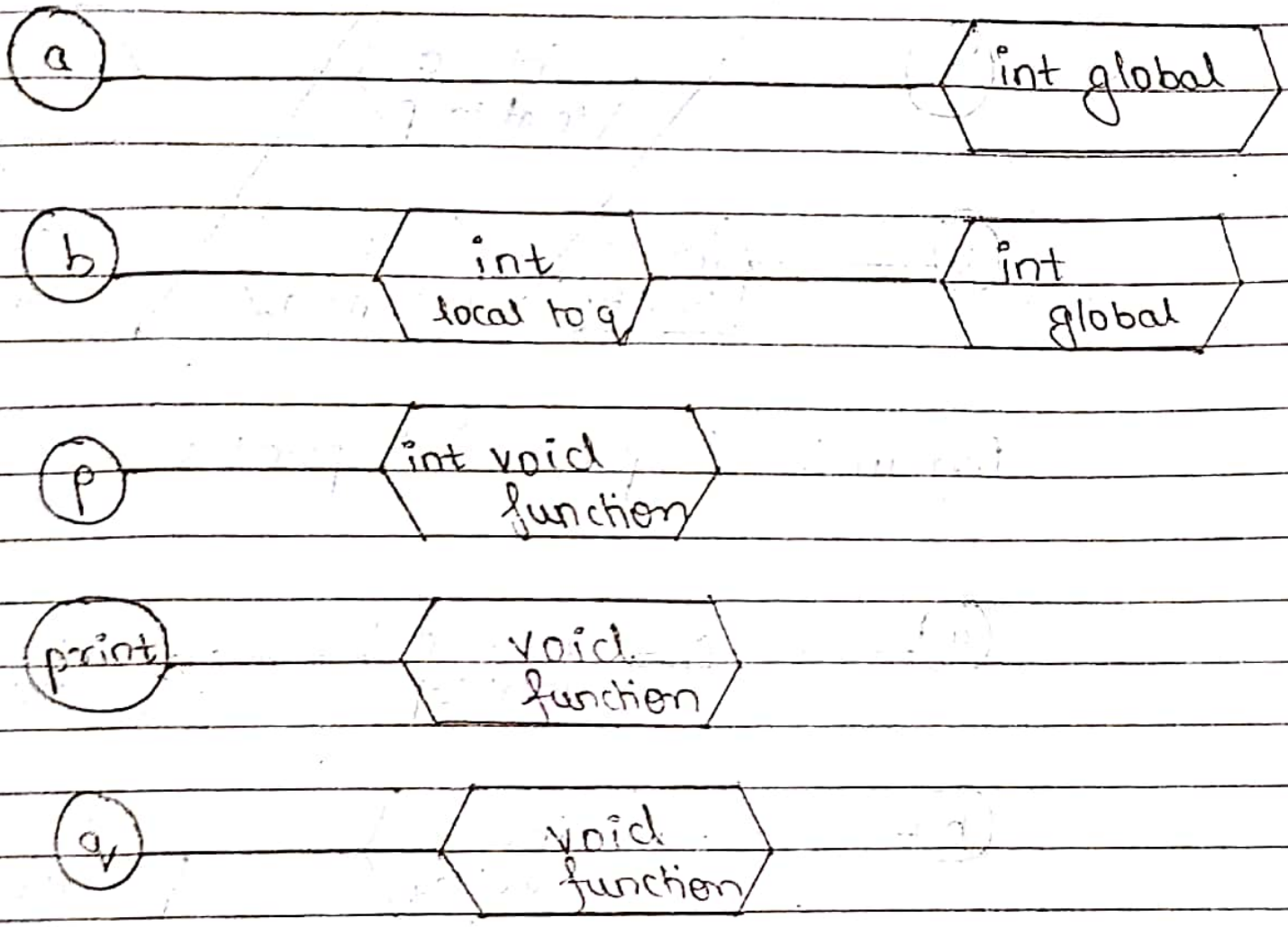


Dynamic Scoping (At point 1)

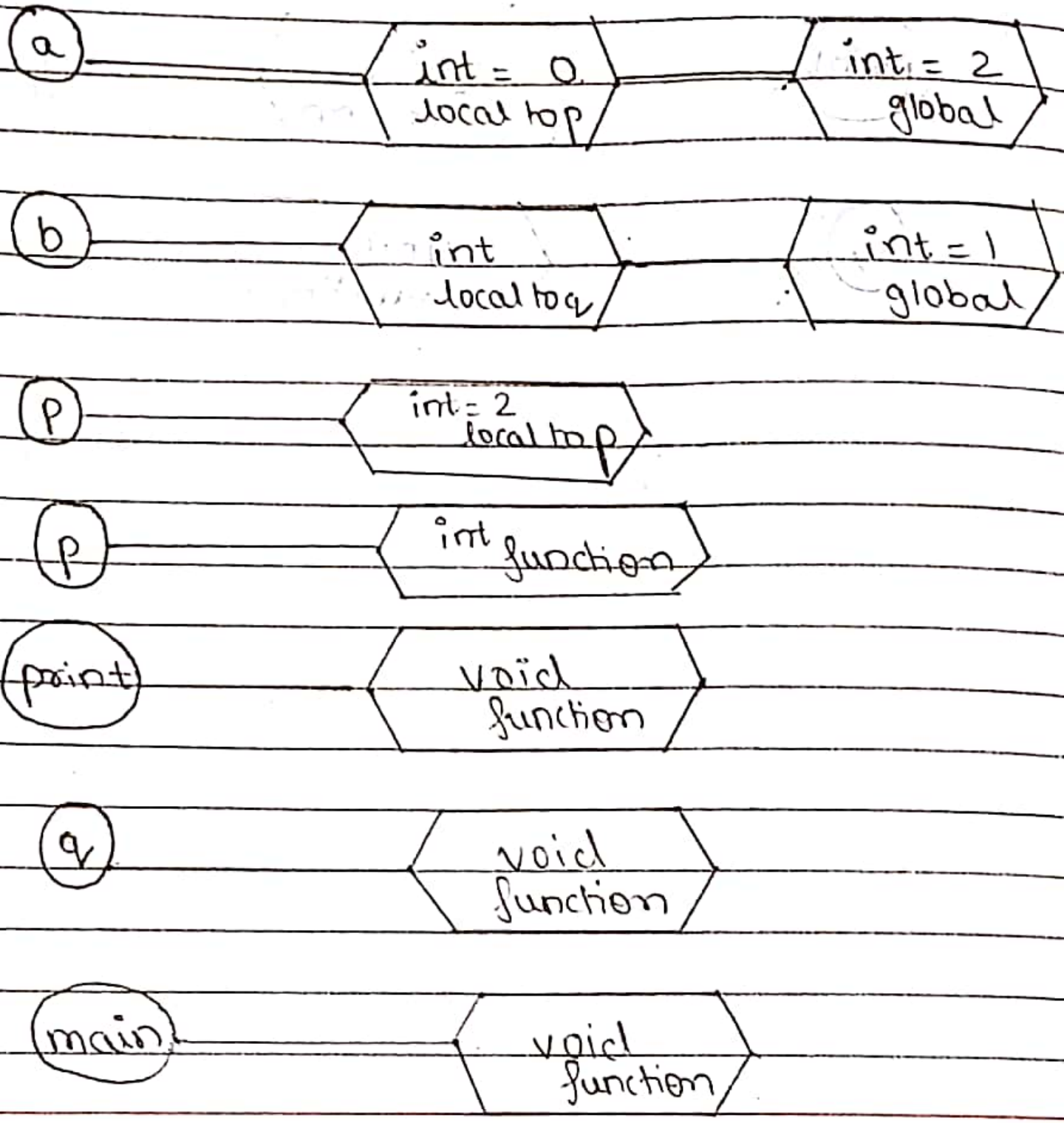


Note: No return type for main() given in question hence considered void

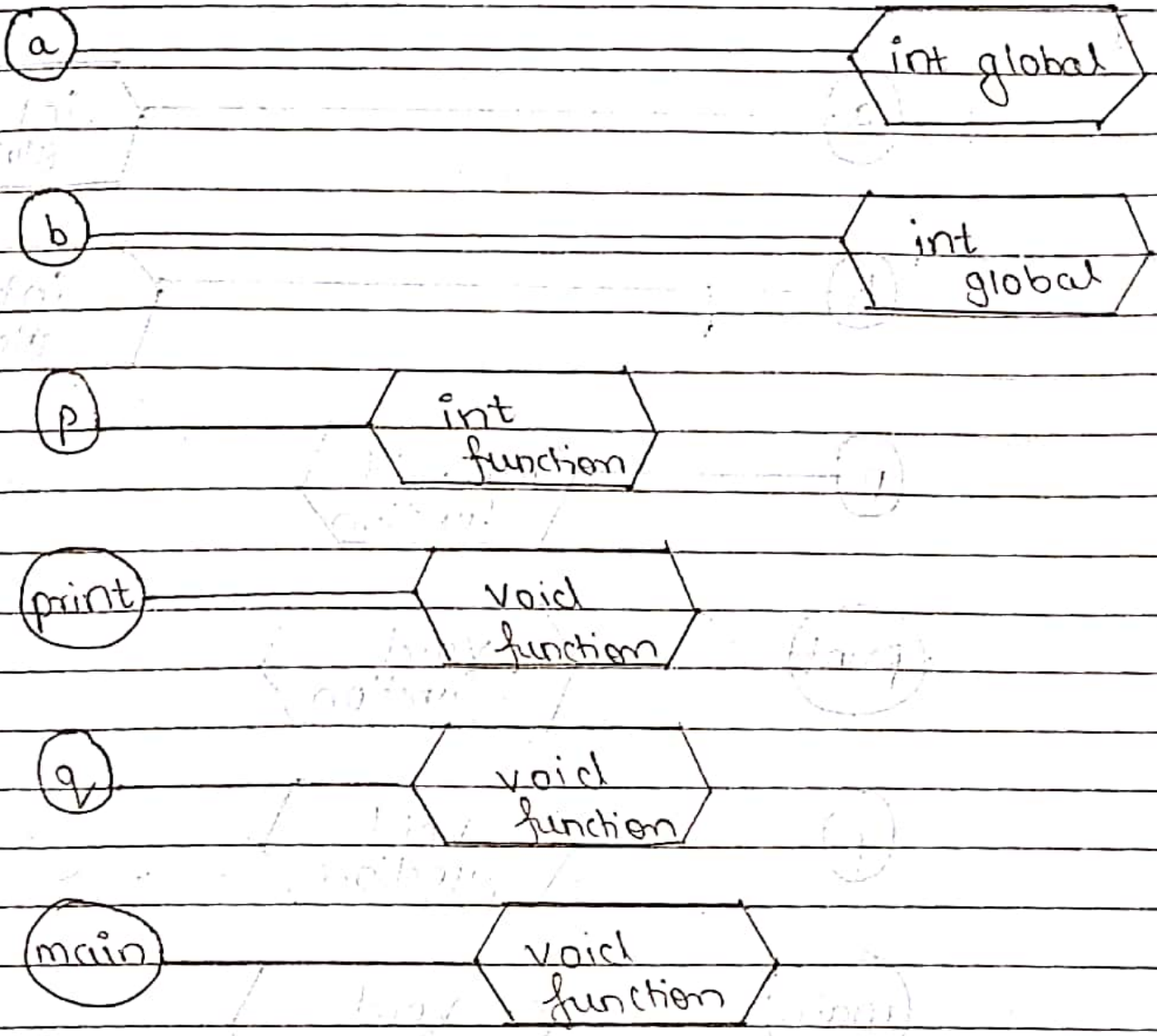
Static Scoping (At point 2)



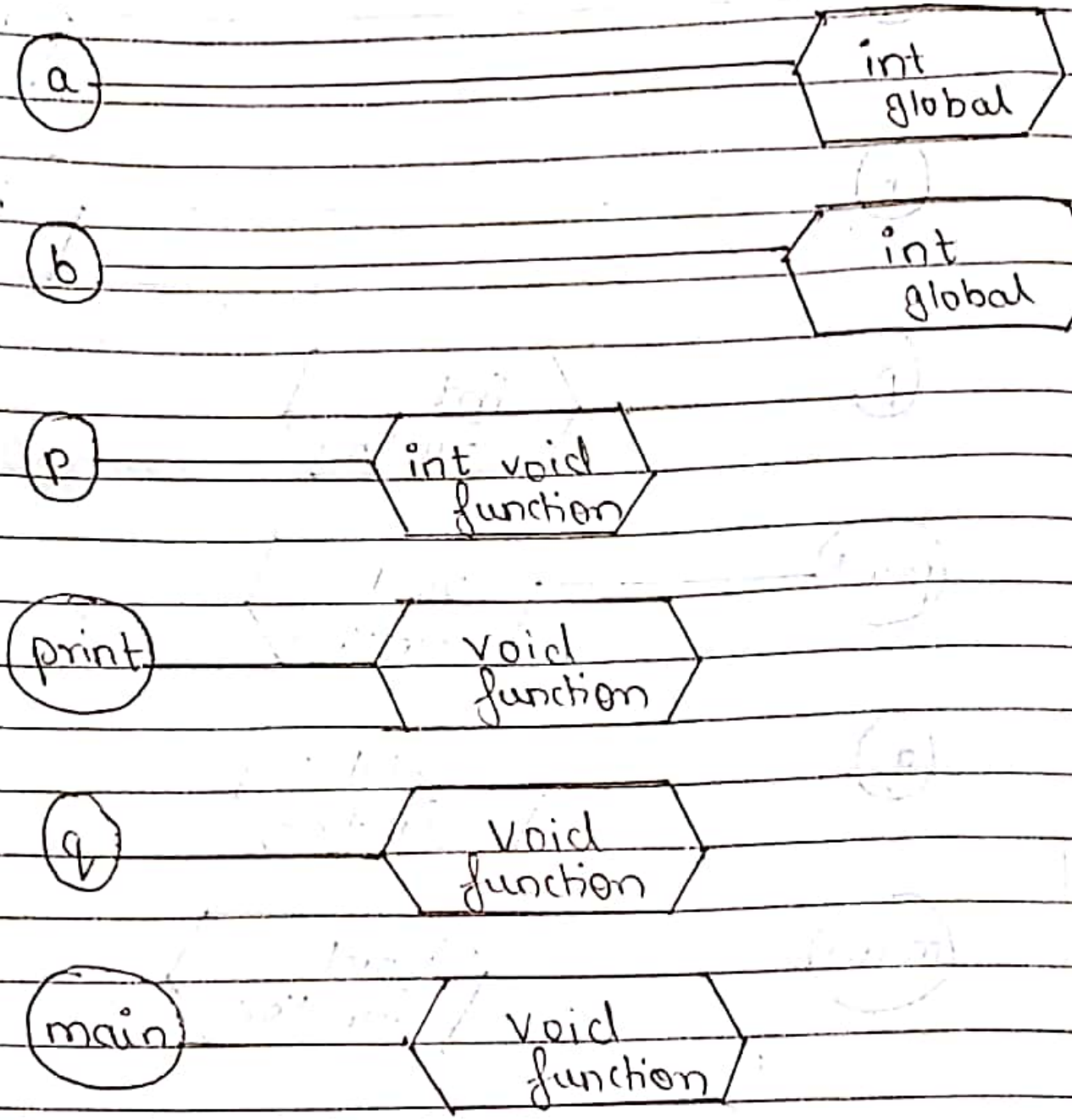
Dynamic Scoping (At point 2)



Static Scoping (At point 3)



Dynamic Scoping (At point 3)



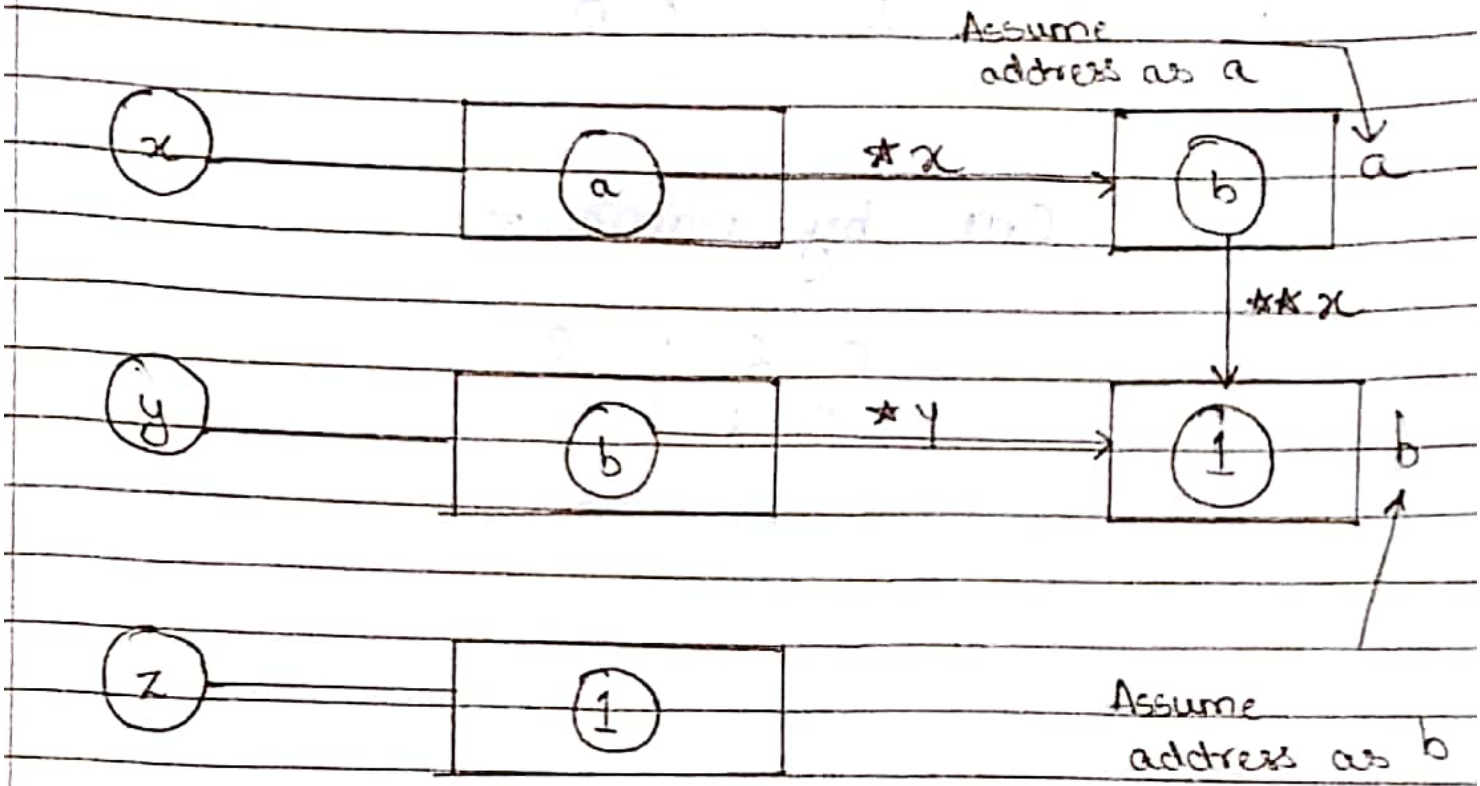
Output :

With static scoping :- 3, 1

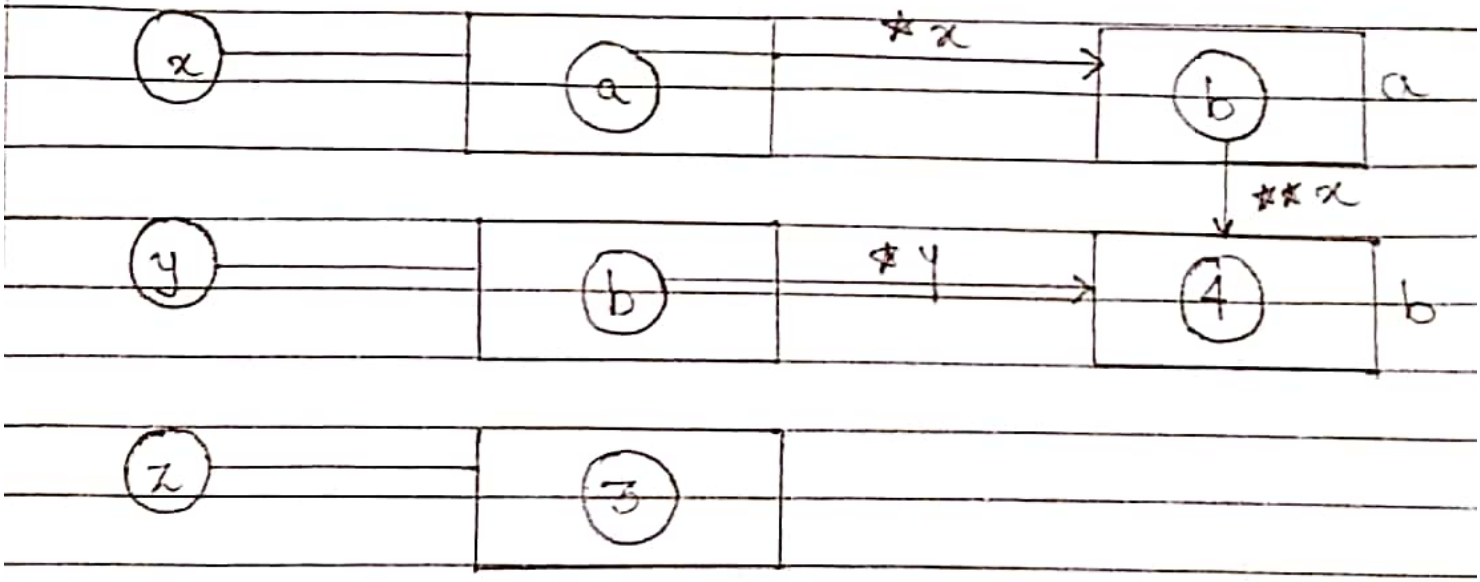
With dynamic scoping :- 3, 4

Answer 4:

At line 11



At line 15



Output of Program :- 1, 1, 3

*y and **x are aliases of each other

Answer 5 :-

Call by reference :-

1 2 1 0

2 0 0

Call by name :-

0 2 1 2

0 1 2