

# CSC148 Worksheet 9 Solution

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## Question 1

Expression 1:

~~(~~ 6  
+  
) 8  
\*  
9  
-  
1  
(

Stack

Were the parentheses balanced?

Yes

☒ No

Expression 2:

~~5~~ a  
~~2~~ )  
b  
-  
2  
/  
)  
)  
)  
b  
+  
)  
3  
\*  
~~1~~  
~~3~~  
~~4~~ (

Stack

Were the parentheses balanced?

☒ Yes

No

Expression 3 :

(	6
	)
	+
	4

Stack

Were the parentheses balanced?

Yes ☒ No

## Question 2

- For each character being received,
  - If the character is left parenthesis, then we need to store it in stack using *push()* method
  - If the character is right parenthesis
    - First, check for the non-emptiness of stack.
    - If the list is not empty, then we need to pop an element form stack.
    - If list is empty, then we need to raise error.
  - If the character is other than left or right parenthesis, then pass the character.
- We will know the parenthesis are balanced when the number of elements in stack is zero after traversing a string.

## Question 3

## Question 4