

Name: MESHAL ALI OKAIRY

Email: mokairy@stu.kau.edu.sa

ID: 2237836

Section: F12

Q1:

Original	S.pop();	S.push(11);	S.pop();	S.pop();	S.pop();	S.push(2);	S.push(3);	S.push(4);	S.push(5);
									Top = 5
Top = 11		Top = 11						Top = 4	4
30	Top = 30	30	Top = 30				Top = 3	3	3
25	25	25	25	Top = 25		Top = 2	2	2	2
17	17	17	17	17	Top = 17	17	17	17	17
1	1	1	1	1	1	1	1	1	1
4	4	4	4	4	4	4	4	4	4
20	20	20	20	20	20	20	20	20	20

Applying the for-loop code:

	i = 0	i = 1	i = 2	i = 3	i = 4	i = 5	i = 6	i = 7
printed	False	True	False	True	False	False	True	False
	Top = 5							
	4	Top = 4						
	3	3	Top = 3					
	2	2	2	Top = 2				
	17	17	17	17	Top = 17			
	1	1	1	1	1	Top = 1		
	4	4	4	4	4	4	Top = 4	
	20	20	20	20	20	20	20	Top = 20

Output: 4 2 4

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Q2:

1- Infix to Postfix  $a+b*c+d*e\#$

Stack	Postfix
	$abc*+de*+$
	$abc*+$
$* *$	$ab$
$+ +$	$a$

2- What is the top of the stack after third  $*$  operations in  $6\ 2\ 3\ * / 3\ 4\ * + 3\ 6\ * -$

Stack till first $*$	Stack till second $*$	Stack till third $*$	Final Stack
$*$	$*$	$*$	
3	$/\ 4$	$+ 6$	
2	$6\ 3$	$12\ 3$	Top = 18
6	$6\ 1$	$1\ 13$	13

3- Show the step-by-step process of evaluation of the postfix expression  $2\ 4\ 6\ +*$  and show the status of the stack after every operation.

Step 1	Step 2	Step 3
$+$		
6	$*$	
4	10	
2	2	20