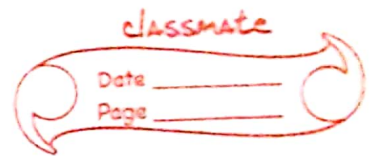


## BODMAS Rule.



Q) Convert into Post fix manually & using Stack operation.

①  $7 + 5 * 3 - 9$

Sol<sup>n</sup>:-

② Manual method :-

$$7 + 5 * 3 - 9$$

$$\therefore 7 + 5 3 * - 9$$

$$\therefore 7 5 3 * + - 9$$

$$\therefore 7 5 3 * + 9 -$$

③ Stack method:-

$$7 + 5 * 3 - 9 \quad \dots \dots \dots \{ \text{Scanning array} \}$$

• array  $\Rightarrow$ 

7	5	3	*	+	9	-
---	---	---	---	---	---	---

• Stack $\Rightarrow$		$+$ = pop + in stack
		$* \geq +$ = True = Push *
		$- \geq *$ = false = Pop *
	-	$- \geq +$ = False = Pop +
	<del>*</del>	- = empty the stack and push - into array
	<del>+</del>	

$$(2) 7 * 8 + 9 - 3 * 2$$

② manual method :-

$$7 * 8 + 9 - 3 * 2 \quad \dots \{ \text{scanning array} \}$$

$$\therefore 78 * + 9 - 3 * 2$$

$$\therefore 78 * + 9 - 32 *$$

$$\therefore 78 * 9 + - 32 *$$

$$\therefore 78 * 9 + 32 * - \Rightarrow \underline{\underline{\text{post fix exp}}}$$

③ Using Stack :-

$$7 * 8 + 9 - 3 * 2 \quad \dots \{ \text{Scanning array} \}$$

array  $\Rightarrow$ 

7	8	*	9	+	3	*	-
---	---	---	---	---	---	---	---

stack  $\Rightarrow$

		* = push to stack
		+ <del>7</del> * = false = pop star & push +
		- <del>7</del> * = false = <del>left to right operation</del> ; push -
	-	+ pop + & push -
	*	- <del>7</del> * = false = push * into array
	*	- = push - into array to empty the stack

③  $8 + 3 + 4 - 9$

① manual method :-

$$8 + 3 + 4 - 9$$

$$\therefore \underline{83} + + 4 - 9$$

$$\therefore \underline{83+4} + - 9$$

$$\therefore 83+4+9 -$$

② using Stack :-

$$\begin{array}{ccccccc} 8 & + & 3 & + & 4 & - & 9 \\ \uparrow & & \uparrow & & \uparrow & & \end{array} \quad \{ \text{scanning array} \}$$

• array  $\Rightarrow$ 

8	3	+	4	+	9	-
---	---	---	---	---	---	---

• Stack  $\Rightarrow$

-
+

$+$  = Push to stack.

$+\geq+$  = True = push  $+$  to array

$-\geq+$  = false = pop  $+$  & push  $-$

$-$  = Pop from stack and push to array.



④  $6^2 + 5$

① manual method :-

$$6^2 + 5$$

~~$36 + 5$~~

∴

$$∴ 6^2 + 5$$

$$∴ 6^2 + 5$$

② using stack.

$6^2 + 5$  --- { Saving Array }

• array  $\Rightarrow$ 

6	2	^	5	+
---	---	---	---	---

• Stack  $\Rightarrow$

+
^

$\wedge$  = push to stack.

$+ \geq \wedge$  = false = Pop  $\wedge$  & push +

+ = Pop + from stack & put into array