1. Assume that the operators +, -, × are left associative and ^ is right associative. The order of precedence (from highest to lowest) is ^, x , +, -. The postfix expression corresponding to the infix expression p + q × r - m ^ n ^ o is

A. pqr × + mno ^ ^ -

B. pqr × + mn ^ o^ -

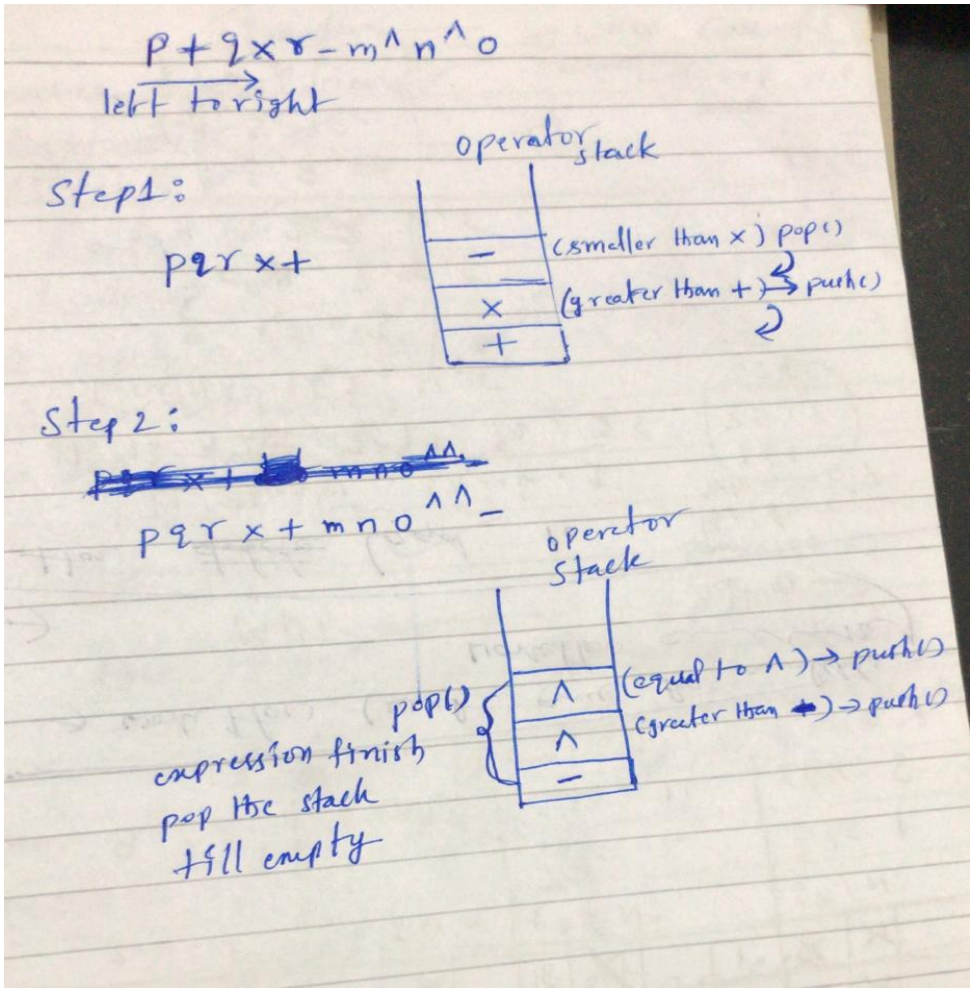
C. pq + r × m - n ^ o ^

D. - + p × qr ^ ^ mno

Answer: A

Explanation:

^ is right assosciative.



2. A priority queue is implemented as a max-heap. Initially, it has five elements. The level-order traversal of the heap is as follows: 30, 28, 25, 23, 22 Two new elements ‘20’ and ‘27’ are inserted in the heap in that order. The level-order traversal of the heap after the insertion of the element is:

A. 30, 28, 27, 25, 23, 22, 20

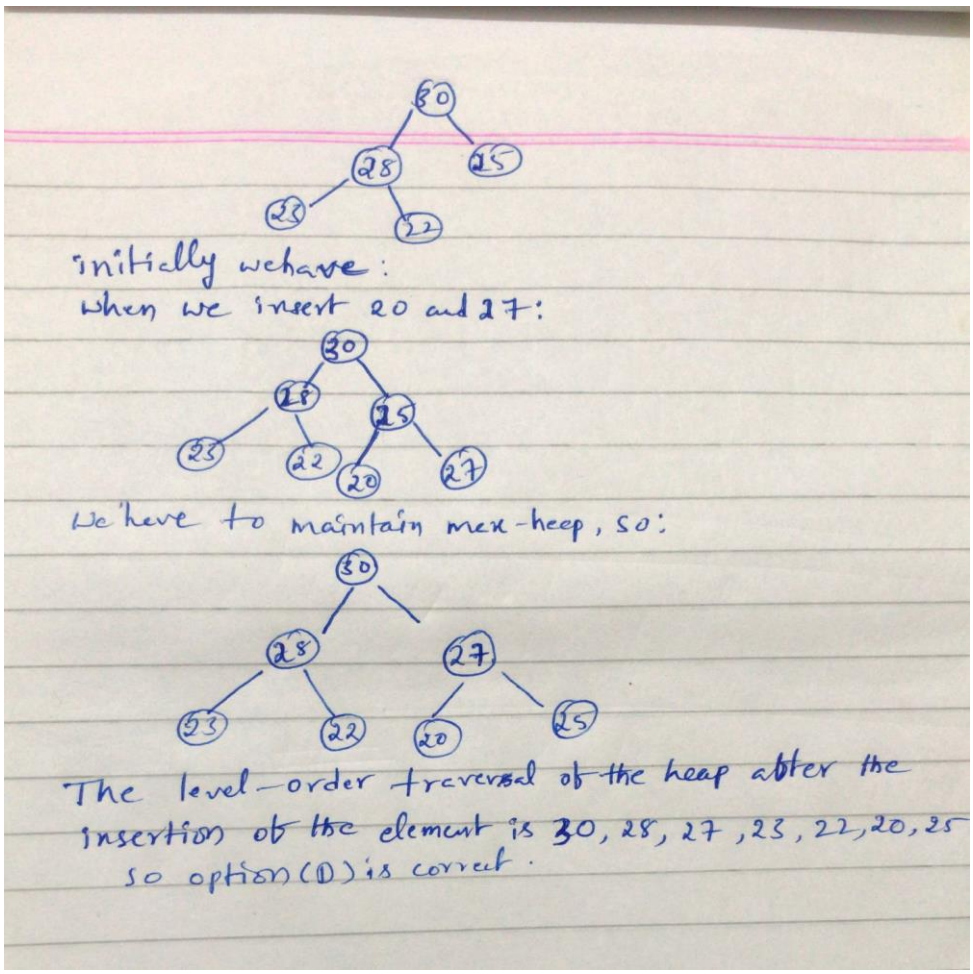
B. 30, 28, 27, 22, 23, 20, 25

C. 30, 28, 27, 20, 22, 23, 25

D. 30, 28, 27, 23, 22, 20, 25

Answer: D

Explanation:



3. The result evaluating the postfix expression 20 5 * 36 9 / - 3 * is

A. 88

B. 100

C. 288

D. 340

Answer: C

4. The five items: A, B, C, D, and E are pushed in a stack, one after other starting from A. The stack is popped four items and each element is inserted in a queue. The two elements are deleted from the queue and pushed back on the stack. Now one item is popped from the stack. The popped item is

A. D

B. C

C. B

D. A

Answer: A

Explanation: Four elements in Queue are E,D,C,B. Now E,D will be deleted from Queue and pushed on to Stack. Now Top of the Stack is D. So the answer is D.

5. Consider empty Stacks S1 (Size = 4) and S2 (Size = 5) and a Queue Q1 (Size=5), perform the below given operations on S1 and Q1 alternatively and PUSH the POPed/Dequeued elements from S1 and Q1 to S2.

Stack Operations	Queue Operations
1. Push L M A B	1. Enqueue P L Q S
2. POP 2 elements	2. Enqueue Y
3. PEEK()	3. Dequeue until FRONT = 4

what will be the output of POPed elements of 'S2' until S2 is empty.

A. S Q L P A B

B. B A L Q S Y

C. B A P L Q S

D. Q L P A B

Answer: D

Explanation: when we pop() 2 times from S1, the elements are B and A,will be pushed in S2.Then Dequeue() until front=4 gives P L Q S which will be pushed on S2. But size of S2 is 5. So it takes only P L Q. So S2 contains (from top) Q L P A B.