

On my honor, I pledge that I have neither recieved nor provided improper assistance in the completion of this assignment. -26900112 2/6/21

## Infix to Postfix Conversion

### ■ Example 3: $a - (b + c * d) / e$

| in | stack(bottom to top) | postfix   |
|----|----------------------|-----------|
| a  |                      | a         |
| -  | -                    |           |
| (  | - (                  |           |
| b  |                      | ab        |
| +  | - ( +                |           |
| c  |                      | abc       |
| *  | - ( + *              |           |
| d  |                      | abcd      |
| )  | -                    | abcd*+    |
| /  | - /                  |           |
| e  |                      | abcd*+e   |
|    |                      | abcd*+e/- |

1. Operands are output immediately
2. Push "(" always and operators in general.
3. For ")", pop until "(" . Discard "(" and ")".
4. For higher precedence operator, push it.
5. For lower or equal precedence operator, pop them until "(" and push it.

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## Infix to Postfix Conversion

### ■ Example 4: $A * (B + C * D) + E$

|    | in | stack(bottom to top) | postfix   |
|----|----|----------------------|-----------|
| 1  | A  |                      | A         |
| 2  | *  | *                    |           |
| 3  | (  | *(                   |           |
| 4  | B  |                      | AB        |
| 5  | +  | *(+                  |           |
| 6  | C  |                      | ABC       |
| 7  | *  | *(+*                 |           |
| 8  | D  |                      | ABCD      |
| 9  | )  | *                    | ABCD*+    |
| 10 | +  | +                    | ABCD*+*   |
| 11 | E  |                      | ABCD*+*E  |
| 12 |    |                      | ABCD*+*E+ |

1. Operands are output immediately
2. Push "(" always and operators in general.
3. For ")", pop until "(" . Discard "(" and ")".
4. For higher precedence operator, push it.
5. For lower or equal precedence operator, pop them until "(" and push it.