

**1. Prefix/Infix/Postfix**

Convert this infix expression into a prefix expression.

$$A^2 + \frac{2B}{C} + \frac{A}{B+C} - \frac{A}{B} \quad - + + \uparrow A 2 / * 2 B C / A + B C / A B$$

**2. Prefix/Infix/Postfix**

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Evaluate the following postfix expression if a = 3, b = -2, and c = 5

$$a b - c / b ^ a - c 2 a * 3 b * - * +$$

**3. Bit-String Flicking**

1110\*, 1000\*

Solve the following for X (5-bit string) that satisfies the equation:

$$\text{NOT} ((\text{LCIRC-2 } 01011) \text{ AND } (\text{RSHIFT-1 } X)) = (\text{RCIRC-2 } 01110 \text{ OR } 10110 \text{ AND NOT } X)$$

**4. Bit-String Flicking**

11010

Evaluate the following expression:

$$(\text{LCIRC-2}(\text{RSHIFT-1 } 01101)) \text{ OR } (\text{NOT}(\text{RCIRC-2}(\text{LSHIFT-1 } 01010)))$$

**5. LISP**

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Evaluate the following LISP expression:

$$(\text{ADD}(\text{ADD } 2 \ 3)(\text{MULT } 4 \ 5)(\text{SUB } 6 \ 2)(\text{EXP } 2 \ 3))$$

**6. Prefix/Infix/Postfix**

Evaluate the following prefix expression if all numbers are single digits:

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$$+ / + 2 4 3 / * 4 + / 6 2 1 8$$

**7. Prefix/Infix/Postfix**

Convert the infix expression to a postfix expression.

AB+C/CAB-\*BC+//

$$\frac{A + B}{C} + \frac{C*(A - B)}{B + C}$$

**8. Bit-String Flicking**

How many values of X (5 bits long) satisfy the following equation?

0\*01\*

$$(\text{RSHIFT}-1 X) \text{ OR } 10110 \text{ AND } 00101 = 00101$$

**9. Bit-String Flicking**

Evaluate the following expression:

$$(\text{LCIRC}-2 (\text{RSHIFT} - 1 (\text{RCIRC} - 1 (\text{LSHIFT} - 1 01101))))$$

11000

**10. What Does This Program Do?**

What is printed when this program is executed?

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```
Z = 0
FOR N = 100 TO 200 STEP 2
  IF (N/3) = INT(N/3) THEN Z = Z + 1
  IF (N/5) = INT(N/5) THEN Z = Z + 1
  IF N/3 = INT(N/3) AND N/5 = INT(N/5) THEN Z=Z-1
NEXT N
PRINT Z
END
```