American Computer Science League

---

1. Prefix/Infix/Postfix

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

$$6\ 2\ ^\wedge\ 6 - 5\ /\ 8\ 6\ 2\ +\ /\ -\ 5\ /$$

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4

---

2. Prefix/Infix/Postfix

Convert this prefix expression into postfix if all numbers are single digits:

$$/\ *\ +\ -\ 5\ 4\ 5\ ^\wedge\ 1\ 4\ /\ 9\ 3$$

- A. $5\ 4\ 5 - + 1\ 4\ ^\wedge * 9\ 3\ /\ /$
- B. $5\ 4 - + 5\ 1\ 4\ ^\wedge * 9\ 3\ /\ /$
- C. $5\ 4 - 5 + 1\ 4\ * ^\wedge 9\ 3\ /\ /$
- D. $5\ 4 - 5 + 1\ 4\ ^\wedge / 9\ 3\ * /$
- E. $5\ 4 - 5 + 1\ 4\ ^\wedge * 9\ 3\ /\ /$

---

3. Bit-String Flicking

Evaluate the following:

00100 OR 10100 AND NOT (01111 OR 00101)

- A. 10100
- B. 00100
- C. 10000
- D. 01111
- E. 00101

---

4. Bit-String Flicking

Evaluate the following expression:

(LCIRC-2 (10011 AND (NOT 11101) OR (RSHIFT-2 11010)))

- A. 00110
- B. 10011
- C. 11000
- D. 00010
- E. 11001

---

5. LISP

Evaluate the following LISP expression:

(CAR (CDR '((0 1) (3 2 1) (2 4 1) (3 2))))

- A. (0 1)
- B. 3
- C. (3 2 1)
- D. ((2 4 1) (3 2))
- E. (2 4 1)