# ACSL

**2016 - 2017** **American Computer Science League** **Contest #2**

**Senior Division**

**1. Prefix/Infix/Postfix**

Convert the following infix expression to prefix:

$$\frac{C(A+B)}{A^2} - \frac{BC+A^2}{B+C}$$

**2. Prefix/Infix/Postfix**

Given a@b = min{a, b} Evaluate the following postfix expression. (Note: all numbers are single digits)

**3 2 2 ↑ @ 1 1 @ + 2 @ 2 2 ↑ @ 2 + 3 1 − @**

**3. Bit-String Flicking**

Evaluate the following expression:

**(RCIRC-2 (LSHIFT-1 (LCIRC-2 (RSHIFT-1 10101))))**

**4. Bit-String Flicking**

Solve for X (5-bits) in the following equation.

**01011 OR (RCIRC-2 X) = 01111**

**5. LISP**

Evaluate the following LISP expression:

(CAR (CDR (CAR '((2 (3) (4 5)) (6 (7 8))))))