

American Computer Science League

2020-2021 • Contest 2: Shorts • Junior Division

1. Prefix-Infix-Postfix Evaluate the following prefix expression if all numbers are single digits: $+ - / * 3 6 2 / + 3 9 4 ^ 2 3$	A. -2 B. 6 C. 12 D. 14 E. 17
2. Prefix-Infix-Postfix Convert this infix expression to postfix: $\frac{A^2 + B}{C} + ABC$	A. $A2^B+/CAB*C*+$ B. $A2^B+C/AB*C*+$ C. $A2^B+C/A*BC*+$ D. $A2B^+C/AB*C*+$ E. $A2^B+C/ABC**+$
3. Bit-String Flicking Evaluate the following expression: (01011 OR (NOT 10010) AND 00011)	A. 01011 B. 00101 C. 11011 D. 00011 E. 01010
4. Bit-String Flicking Evaluate the following expression: (NOT (RSHIFT-2 (LCIRC-2 10011)))	A. 11000 B. 00111 C. 10100 D. 11001 E. 11100
5. What Does This Program Do? (Loops) What is the final value of c when this program is executed? c = 0 for i = 1 to 50 if i % 4 == 3 then c = c + 1 next i for j = 2 to 50 step 2 if j % 6 == 0 && j % 4 != 0 then c = c + 1 if j % 7 == 0 then c = c + 1 next j	A. 15 B. 17 C. 19 D. 21 E. 23

