1. What Does This Program Do?
   If A$ is 128 characters in length, what is the length of E$ after the following program is RUN?
   
   10  B$ = LEFT$ (A$, 100)
   20  C$ = MID$(A$, 52, 12) + MID$(B$, 26, 13)
   30  D$ = RIGHT$(C$, 13)
   40  E$ = B$ + C$ + D$

2. Prefix-Infix-Postfix
   Rewrite the following infix expression in postfix:
   
   A ( B + D) / ( C – E )

3. Prefix-Infix-Postfix
   Given A = 2, B = 4 and C = 8, evaluate the following prefix expression:
   
   + - + A * B C + A C C

4. Data Structures
   If a binary tree is formed using the letters of the word MONTREAL, what is the internal path length of the tree?

5. Data Structures
   Consider an initially empty stack and then execute the following commands on that stack. What element is at the top of the stack?
   
   PUSH (A)
PUSH (B)
POP (X)
PUSH (C)
POP (X)
PUSH (D)
POP (X)
PUSH (E)
PUSH (F)
POP (X)
PUSH (X)
PUSH (X)