1. Which of the following are valid prefix or postfix expressions?

A/   A B C + *
B/   *** + - A * B C D / E F**
C/   * A + B - C D * / E F
D/   A + B C -
E/   A + B * C

2. Convert the following into prefix:

    (X + Y) / P Q

3. If a = 1, b = 3, c = 2, and d = 4, evaluate the following prefix expression:

    - / + * 2 a c d / + ^ b 2 a + b c

4. Convert the following expression into postfix:

    3A / (B + C)A - B

5. Which of the following are valid postfix expressions?

A/   A B + C *
B/   + A * B C
C/   A + B * C
D/   A B + C D * E / F - +
E/   A B C D E F + * + + /

6. Convert the following expression into postfix:

    A ^ 2 * B - C / D * E

7. Convert the following expression into prefix:

    A (B + D) / (C - E)

8. Evaluate the following postfix expression when A = 1, B = 2, and C = 3:

    A B C * + A C + - C +