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CECS 424 Assignment 8 #2

(a) (10 points) Translate the following expression into postfix and prefix notation.

(b ∗ b − 4 ∗ a + c)/(2 ∗ a)

Postfix:

b b \* 4 a \* - c + 2 a \* /

Prefix:

/ + - \* b b \* 4 a c \* 2 a

(b) (10 points) Consider the following program in C++. What will be the final values

of fp count and int count. Run the program in your system and explain your

answer.

int fp\_count = 0, int\_count = 0;

for (float i = 0; i < 1; i += 0.01) {

fp\_count++;

}

for (int i = 0; i < 100; i += 1) {

int\_count++;

}

The final value of fp\_count will be 101 and the final value of int\_count will be 100. In the for loop with float, the value i will get close to 1 but not actually reach 1 at the end of the loop. So the fp\_count will get to increment once more before the loop ends, while the for loop with int will perform as expected.