

EECE.2160: ECE Application Programming

Spring 2019

Lecture 4: Key Questions

January 30, 2019

QUESTIONS:

1. What are the basic binary arithmetic operators supported by C?
2. Explain the modulus operator (%).
3. What determines the type of a binary operation's result?
4. What is the difference between division of integers and floating-point types?
5. Explain the operation of the unary negation operator (e.g., $-x$).
6. Describe the use of `printf()` to print numeric values and characters.

EXAMPLES:

1. What values do `w`, `x`, `y`, and `z` have at the end of this program?

```
int main() {
    int w = 5;
    float x;
    double y;
    char z = 'a';
    x = 8.579;
    y = -0.2;
    w = x;
    y = y + 3;
    z = w - 5;
    return 0;
}
```

2. Evaluate each of the following expressions, including the type (`int` or `double`) in your answer.

a. $19/3$

b. $3/19$

c. $19\%3$

d. $3\%19$

e. $5 + 7/2$

f. $5.0 + 7/2$

g. $5 + 7.0/2$

h. $5 * 3 \% 3 / 6 + 14 + 10 / 2$

i. $5 * (3 \% 3) / 6 + 14.0 + 10/3$