

EECE.2160: ECE Application Programming

Fall 2017

Lecture 4: Key Questions

September 13, 2017

1. **Example:** 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. What are the basic binary arithmetic operators supported by C?
3. Explain the modulus operator (%).
4. What determines the type of a binary operation's result?
5. What is the difference between division of integers and floating-point types?

6. Explain the operation of the unary negation operator (e.g., $-x$).
7. **Example:** 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. $5 * (3 \% 3) / 6 + 14.0 + 10/3$

8. Describe the use of `printf()` to print numeric values and characters.