

## CS 108 final exam ideas

Identify, explain, and give example of the following terms:

- Declaration
- Initialization
- Identifier
- Assignment
- Variable
- Method
- Class
- Object
- Keyword
- Expression

Short-answer questions:

- What is Java?
- What is the Java Virtual Machine?
- What is a GUI?
- What is the SDLC?

Implement the following equations in valid Java code/syntax.

- Write a method called *calcRelativeLift*, which takes a formal parameter *double w*, and returns a *double*.

$$T(w) = 10^{ax^2}, \quad w \leq 135.39 \text{ kg}$$

$$T(w) = 1, \quad w > 135.39 \text{ kg}$$

$$\textit{where} \quad x = \log\left(\frac{w}{135.39}\right)$$

$$a = 1.348195177$$

Given a piece of code, identify errors in the code, things like (but not limited to):

- Incorrect package declarations
- Using variables out of proper scope
- Not testing a null reference before using it
- Testing equality of strings with ==
- Array index out of bounds
- Attempting to access private variables from outside the class
- Infinite loop / no counter increment / unreachable condition
- Specifying types in method call arguments
- Misuse of integer division