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`.

\[
T(w) = 10^{ax^2}, \quad w \leq 135.39 \text{ kg} \\
T(w) = 1, \quad w > 135.39 \text{ kg}
\]

\[
where \quad x = \log\left(\frac{w}{135.39}\right) \\
a = 1.348195177
\]

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