



Your Name: _____
ID#: _____

TA's Name: _____
Section #: _____

SOLUTION: Take-Home: Quiz 7 (15 pts) - Inheritance in C++

Part I: Short Answer.

1. (5 pts) What is inheritance? Explain.

The ability of a class (derived) to derive properties from a previously defined (base) class. The derived class customizes the properties of the base or acquired class. It's considered a form of software or code reuse.

Part II: Fill-In-The-Blank.

2. (2 pts - 1 pt/blank) A base class's _____ **protected** _____ and _____ **public** _____ members can be accessed in the base-class definition, in derived-class definitions, and in friends of the base class and derived classes.

3. (2 pts) Inheritance is representative of a(n) _____ **is-a** _____ relationship. A Rectangle object demonstrates this relationship because it can be treated as a Shape object.

4. (2 pts) When an object of a derived class is instantiated, the base class' _____ **constructor** _____ is called implicitly or explicitly to initialize the data members of the base-class in the derived-class object.

5. (2 pts) _____ **Multiple inheritance** _____ is demonstrated when a derived class inherits properties from 2 or more base classes.

6. (2 pts) Software _____ **reuse** _____ provides higher levels of developer production through leveraging well tested, quality code.