Chap 10 Questions

Multiple Choice

1. When one object is a specialized version of another object, there is an \_\_\_\_\_ between them. **Answer: A. “is a” relationship.**
2. In an inheritance relationship, the \_\_\_\_\_ is the general class. **Answer: B. Base class.**
3. In an inheritance relationship, the \_\_\_\_\_ is the specialized class. **Answer: C. derived class.**
4. Base classes are sometimes called \_\_\_\_\_. **Answer:** **D. Superclasses.**
5. Derived classes are sometimes called \_\_\_\_\_. **Answer: B. Subclasses.**
6. The \_\_\_\_\_ refers to the base class. **Answer: C. base keyword.**
7. The term \_\_\_\_\_ refers to an object’s ability to take different forms. **Answer: C. Polymorphism.**
8. When a derived class method has the same name as a base class method, it is often said that the derived class method \_\_\_\_\_ the base class method. **Answer: C. Overrides.**
9. The \_\_\_\_\_ declares that a derived class is allowed to override a method.

**Answer: D. virtual keyword.**

1. The \_\_\_\_\_ declares that this method overrides a method in the base class.

**Answer: A. override keyword.**

1. A class that is not intended to be instantiated, but used only as a base class, is called a(n) \_\_\_\_\_. **Answer: D. Abstract class.**
2. To declare a class as abstract, you use the \_\_\_\_\_ in the class header.

**Answer: A. abstract keyword.**

1. A regular, non-abstract class is sometimes called a \_\_\_\_\_. **Answer: C. Concrete class.**
2. A(n) \_\_\_\_\_ is a method that appears in a base class but expects to be overridden in a derived class. **Answer: A. Abstract method.**
3. A(n) \_\_\_\_\_ is a property that appears in a base class but expects to be overridden in a derived class. **Answer: D. Abstract property.**
4. \_\_\_\_\_ allows a base class reference variable to reference a derived class object.

**Answer: B. Inheritance.**

True or False

1. The base class inherits fields, properties, and methods from the derived class. **Answer: False.**
2. Polymorphism allows a class variable of the base class type to reference objects of either the base class or the derived class types. Answer:
3. Properties in a base class cannot be overridden in the same way that methods can be overridden. Answer:
4. A base class reference variable can reference an object of any class that is derived from the base class. Answer:
5. A statement that tries to use the new operator to instantiate an abstract class will not compile. Answer:
6. A class that is not intended to be instantiated, but used only as a base class, is called a concrete class. Answer:
7. When an abstract property appears in a class, it must be overridden in any class that is derived from the class. Answer:

Short Answer

1. What does a derived class inherit from its base class? Answer:
2. Look at the following code, which is the first line of a class declaration. What is the name of the base class? What is the name of the derived class? Code: ” *class Tiger : Felis ”* Answer:
3. Can methods in the derived class directly access the base class’s private members?
4. When you create an instance of a derived class, which constructor is called first? Answer:
5. In what kind of situation would you want to use an abstract class instead of a base class? Answer:
6. What is the primary difference between an abstract class and a regular class? Answer:
7. Can abstract classes also contain abstract properties? Answer: