10.1.4, 10.2.1, 10.3.1 10.4.2

**10.1.4**

1. A class that can serve as the basis for another class is called a \_\_\_\_\_ class.
   1. Base
2. Class Dwelling has data members door1, door2, door3. A class House is derived from Dwelling and has data members wVal, xVal, yVal, zVal. How many data members does and initialization House h = new House();  create?
   1. 7

**10.2.1**

1. BaseClass' public member method can be called by a member method of DerivedClass.
   1. Yes
2. BaseClass' protected member method can be called by a member method of DerivedClass
   1. Yes
3. BaseClass' private field can be accessed by a member method of DerivedClass.
   1. No
4. For DerivedClass derivedObj = new DerivedClass(); in main(), derivedObj can access a protected member of BaseClass. Assume main() is defined in a class located in the same package as DerivedClass.
   1. Yes
5. For BaseClass baseObj = new BaseClass(); in main(), baseObj can access a protected member of BaseClass. Assume main() is defined in a class located in a **different** package as BaseClass.
   1. No

**10.3.1**

1. myItem.printItem() calls the printItem() method for which class?
   1. GenericItem
2. myProduce.printItem() calls the printItem() method for which class?
   1. ProduceItem
3. Provide a statement within printItem() method of the ProduceItem class to call the printItem() method of ProduceItem's base class.
   1. Super.printItem()
4. If ProduceItem did NOT have its own printItem() method defined, the printItem() method of which class would be called?
   1. genericItem

**10.4.2**

1. User-defined classes are not derived from the Object class.
   1. False
2. All classes can access Object's public and protected methods (e.g., toString() and equals()) even if such methods are not explicitly overridden.
   1. True
3. The built-in Integer class overrides the toString() method in order to return a String representing an Integer's value.
   1. True
4. The Object class's toString() method returns a String containing only the Object instance's type.
   1. False
5. The Counter class doesn't have a constructor. Why doesn't it need one?
   1. This is because the variables are initialized outside of the method and the object is just sitting there to be called on
6. The Counter class doesn't have a main. Why doesn't it need one?
   1. Since the class is within the same package as runner.java, then that means that the class is just being used as extra space for the call to the Counter variables.
7. How do we know ModNCounter inherits from Counter (what is the keyword)?
   1. It inherits information from Counter because it uses extend to show that the class inherits from the super class
8. Which method is the constructor inside ModNCounter class?
   1. Public ModNCounter is the constructor or the class because it takes in an argument
9. Is cycleLength variable visible to the parent Counter class?
   1. It is not because of it only being used within this inherited class
10. What happens when we call value and reset methods for ModNCounter since it is not defined in ModNCounter?
    1. Since we are using extend, it is calling the increment method within Count to increment the count of the value or reset the value.
11. What happens when we call increment and reset methods for ModNCounter2 since it is not defined in ModNCounter2?
    1. Since we are using extend, it is calling the increment method within Count to increment the count of the value or reset the value.
12. Does decrement exist inside Counter?
    1. No decrement does not exist anywhere so thr code has to move around this issue of not having a method called decrement.
13. Does increment’s behavior change for DecrementableCounter?
    1. No it doesn’t because we are just manipulating how the Count variable in incremented and when it is incremented instead of constantly being incremented.
14. Where is toString being inherited from?
    1. This is being inherited from the when making a string statement print out but instead of just making printing the hash number it creates a object of SeasonCounter type and then names it string to be printed out.