Please read sections 10.4 and 10.5 from your textbook and answer the following questions.

**1. Why do constructors need to be made in a subclass if they already exist in a superclass?**

If not constructor is written, then a default constructor would be made for the superclass, which would have no parameters. The subclass would not inherit (I think) the parameters, and they need to be written again by calling the superclass.

**2. When implementing constructors in the subclass, what must be the first statement in the subclass constructor?**

The constructor call must be the first statement of the subclass constructor.

**3. If a subclass constructor does not call the superclass constructor, what happens?**

The superclass will then be constructed with its default constructor (the one with no parameters). If all of the constructors of the superclass need parameters, then there will be a compile error

**4. When calling a method with super, does the super call have to be first?**

No, because it indicates a call to the superclass method, which can be made anywhere within the subclass method.

**5. If you convert from a more specific reference to a less specific reference, what exactly happens?**

The objects become less and less “informed,” as they are able to call fewer methods as they convert to less specific references. A superclass object cannot call a subclass method. Less information is known about the object that is converted to a higher class.

**6. What if you want to convert the other way (from a superclass reference to a subclass reference)...  What must be done?**

You must cast the higher class object as a lower class object

**7. Look on page 453 at the transfer method.  The second parameter is of type BankAccount.  Why can't it be changed to something more general, such as type Object, instead?**

If it was of type object, it would not be able to call the deposit method. The Object class does not have a deposit method built in and is too high of a class to be able to call the subclass deposit method. This is an example of conversions to higher classes and how the object loses information and the ability to call methods of its former subclass.