**R9.3. Which methods does the ChoiceQuestion class inherit from its superclass? Which methods does it override? Which methods does it add?**

(From the code snippet in 9.1) ChoiceQuestion inherits the setText, setAnswer, checkAnswer, and display methods from its Question superclass. However, ChoiceQuestion overrides the display method. It also adds the addChoice method.

**R9.4. Which methods does the SavingsAccount class in How To 9.1 inherit from its superclass? Which methods does it override? Which methods does it add?**

SavingsAccount inherits the deposit, withdraw, monthEnd, and getBalance methods from its BankAccount superclass. However, SavingsAccount overrides both the withdraw and monthEnd methods. Finally, SavingsAccount adds a setInterestRate method.

**R9.5. List the instance variables of a CheckingAccount object from How To 9.1.**

The CheckingAccount class has one instance variable. This is a private int variable called withdrawals, which keeps track of the number of withdrawals the user makes.

**R9.6. Suppose the class Sub extends the class Sandwich. Which of the following assignments are legal?**

**Sandwich x = new Sandwich();**

**Sub y = new Sub();**

**a. x = y;**

This assignment is legal because x refers to the superclass while y refers to the subclass. Furthermore, any object of the subclass can access all of the methods from the superclass, so this assignment works.

**b. y = x;**

This assignment is not legal because it tries to assign an object of the sub class to the superclass. However, the superclass can’t access all of the methods of the subclass, so this assignment does not work.

**c. y = new Sandwich();**

Again, this assignment is not legal because you’re assigning an object of the subclass to the superclass, which does not work.

**d. x = new Sub();**

Because x refers to the superclass, this assignment is legal as you are assigning an object of the superclass to the subclass.

**R9.11. Which of these conditions returns true? Check the Java documentation for the inheritance patterns. Recall that System.out is an object of the PrintStream class.**

**a.System.out instanceof PrintStream**

True

**b.System.out instanceof OutputStream**

True

**c.System.out instanceof LogStream**

False

**d.System.out instanceof Object**

True

**e.System.out instanceof Closeable**

False

**f.System.out instanceof Writer**

False