1. (4 points) “Computing is information processing”; how is most processing accomplished in Java? 
   *By sending messages to objects.*

2. (4 points) Why are accessors called accessors? 
   *They allow objects to access the values in variables inside other objects.*

3. (4 points) What does “pixel” stand for? What does it mean? 
   *Picture element. A pixel is a dot on the screen; the smallest part of a Graphics context.*

4. (4 points) Write Java code to declare an variable of type Foo named aFoo. 
   ```java
   Foo aFoo;
   ```

5. (4 points) Create an object of type Foo and store it in aFoo (see previous question). 
   ```java
   afoo = new Foo();
   ```

6. (5 points) Send the aFoo object the bar() message with the parameter 200. 
   ```java
   afoo.bar(200);
   ```

7. (4 points) Where is information stored in a Java program? *In variables!*

8. (4 points) Java is a typed language, so all information in a Java program has a type. Name two types you have used in your programs. *int, String, Button*

9. (5 points) Write Java code to convert a String, s, to an int, anInt. 
   ```java
   anInt = Integer.parseInt(s);
   ```

10. (4 points) Write a line of Java code to convert an int, anInt to a String. 
    ```java
    s = "" + anInt;
    ```

11. (5 points) Write a line of Java code to convert an Object, anObject, to a String, and send the result as a parameter to System.out along with the println() message. 
    ```java
    System.out.println(anObject.toString());
    ```

12. (2 points) What must every identifier in Java start with? *A letter.*

13. (3 points) What characters are allowed in Java identifiers? *Letters, digits, and underscores.*

14. (2 points) Which, by convention, begin with a capital letter, object or class names? *Class names.*

15. (3 points) What are three Java statements we have covered so far? *return, assignment, message*

16. (10 points) Assume you have a Circle class, with int variables, x, y, and r (as in lab 4). Write a paint(Graphics) method. 
    ```java
    public void paint(Graphics g) {
        g.drawOval(x-r, y-r, r*2, r*2);
    }
    ```

17. (3 points) Write a RedCircle class, which acts in all respects like the Circle class except that it draws itself in red. 
    ```java
    class RedCircle extends Circle {
        public void paint(Graphics g) {
            g.setColor(Color.red);
            super.paint(g);
        }
    }
    ```

18. (3 points) Write a LyingCircle class which, when sent getR(), returns twice its radius. Again, only one method is allowed. 
    ```java
    class LyingCircle extends Circle {
        int getRadius() {return radius*2;}}
    ```

19. (5 points) Write a method, named add, which returns the sum of its two int parameters. 
    ```java
    int add(int x, int y) {return x+y;}
    ```

20. (10 points) Write a complete class named Account. Your class should have one variable, balance (to store the current balance in the account) and accessors for the balance variable. 
    ```java
    class Account {
        int balance;
        int getBalance() {return balance;}
        void setBalance(int b) {balance=b;}
    }
    ```

21. (10 points) Write a complete class named Test, which has only a public static void main(String [] args) method, which creates two Accounts, sets their balances to 100 and 1000000, respectively, then prints the balances. 
    ```java
    class Test {
        public static void main(String[] args) {
            Account a1=new Account(); Account a2=new Account();
            a1.setBalance(100); a2.setBalance(1000000);
            sout("a1: $" + a1.getBalance() + " a2: $" + a2.getBalance());
        }
    } //test