

H09: (Based on Horstman, Chapters 7 and 8) Total Points: 50

Accepted: on paper, in lecture (1-1:50pm) on Monday, May 4th only.  
No email submission allowed.

Name: (2 pts) \_\_\_\_\_ UCSBNetID (2 pts) \_\_\_\_\_

**Section (4 pts) Circle one:**      Thu 4pm                  Fri 10am                  Fri 11am                  Fri noon

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1. In Java, each of the primitive types has an associated "wrapper type".
  - a. (5 pts) What is the wrapper type for `int`?
  
  - b. (5 pts) What is the primitive type associated with the wrapper type `Character`?
  
2. (5 pts) Here is a for loop that goes through all the elements of an array called `balances`, and counts how many of them are negative:

```
int [] balances = {2000,-10,3000,-15,4000};  
  
int overDrawnCount = 0;  
  
for (int i=0; i<balances.length; i++)  
{  
    if (balances[i] < 0)  
        overdrawnCount++;  
}
```

Rewrite this section of code using the enhanced for loop from section 7.4 of the text.

3. (12 pts) Match the method computing number of elements with the appropriate Data Type (draw a line between them).

a.length	Array
a.length()	Array list
a.size	String
a.size()	(none of the above)

4. (5 pts) What do we mean when we talk about the *scope* of a variable?

Please turn over for more problems

5. The `Movie` class below compiles perfectly, but there is a problem with the constructor.

- a. (5 pts) Describe the problem with this program—what is wrong, and why will this not work?
- b. (5 pts) Show how to fix it.

```
public class Movie
{
    private int year;
    private String title;

    /**
     * Constructor for objects of class Movie
     * @param theYear the year the movie was released
     * @param theTitle the title of the movie
     */

    public Movie(int theYear, String theTitle)
    {
        int year = theYear;
        String title = theTitle;
    }

    /* ... Other methods would go here, but don't
       concern yourself with that.
       Just say what's wrong with the constructor. */
}
```