

Signature \_\_\_\_\_

CSE 8B

Name \_\_\_\_\_

## Quiz 2

cs8b \_\_\_\_\_

Spring 2015

Student ID \_\_\_\_\_

This quiz is to be taken **by yourself** with closed books, closed notes, no electronic devices.

You type `java TestMe` at the command line and you get the following:

```
Exception in thread "main" java.lang.NullPointerException
    at Boo.run(Boo.java:28)
    at TestMe.main(TestMe.java:5)
```

Is this a compile time or a run time error? runtime

What method in what class in what file and line number in your code did this occur?

Method run Class boo

File boo.java Line # 28

Given the definition of class Crazy below, indicate the output of each `println` statement when this is run.

```
public class Crazy {
    private int n;
    private boolean bool;

    public Crazy() {}
    public Crazy(int n, boolean bool) {
        this.n = n++;
        this.bool = bool;
    }
    public Crazy(int n){
        this.n = n++ * 2;
        if(n == 20) {
            this.bool = true;
        }
        else {
            this.n = ++n;
            this.bool = false;
        }
    }
    public String toString() {
        return this.n + ", " + this.bool;
    }
    public static void main(String[] args)
    {
        int n = 10;
        boolean bool = true;
        Crazy var1 = new Crazy();
        System.out.println(var1);

        Crazy var2 = new Crazy(n, bool);
        System.out.println(var2);

        Crazy var3 = new Crazy(n);
        System.out.println(var3);
    }
}
```

0 \_\_\_\_\_, false \_\_\_\_\_

10 \_\_\_\_\_, true \_\_\_\_\_

12 \_\_\_\_\_, false \_\_\_\_\_

An uninitialized boolean local variable has what initial value (circle one)?

false    true    0    1    **No initial value**

Recall from PA2, class WordPair (right) is defined with a word and a count along with accessor methods `getWord()` and `getCount()`. We used an `ArrayList` of these WordPair objects to maintain information about the number of occurrences of each word in a text file. You can assume there are no duplicate count values - each word has a different count value. You can also assume there is at least one WordPair object in the `ArrayList`.

```
public class WordPair {  
    private String word;  
    private int count;  
  
    public String getWord() {  
        return word;  
    }  
  
    public int getCount() {  
        return count;  
    }  
    ...  
}
```

**(3 pts)** What does the following method do? **Write the letter corresponding to your answer here** E

```
public static String mystery( ArrayList<WordPair> list, int x ) {  
    int var1 = 0;  
    String var2 = null;  
  
    for ( int i = 0; i < list.size(); i++ ) {  
        if ( list.get(i).getCount() == x ) {  
            var1 = list.get(i).getCount();  
            var2 = list.get(i).getWord();  
        }  
    }  
    return var2;  
}
```

- A) Finds the max count of any word
- B) Finds the min count of any word
- C) Finds the word with the max count
- D) Finds the word with the min count
- E) Finds the word with the specified count
- F) Finds the count of the specified word
- G) Finds the index of the specified word
- H) Finds the index with the specified count

Fill in the blanks to correctly initialize a Nim board with the number of rows (num) provided by the user:

```
public class Nim {  
    private int[] board;  
  
    public Nim( int num )  
    {  
        board = new int[num]; // instantiate  
  
        board[0] = num + (num - 1); // largest row  
        for( int i = 1; i < board.length; ++i ) {  
  
            board[i] = board[i - 1] - 2;  
        }  
    }  
}
```

Given the loop from above:

```
for(int i = 1; i < board.length; ++i)
```

Which of the following loops below cause variable “i” to have the same values **inside the loop** as the loop above (circle each correct answer):

for(int i = 1; i < board.length; i++)

for(int i = 2; i < board.length; i++)

for(int i = 0; ++i < board.length; )

for(int i = 0; i++ < board.length; )