Name:
EID:
Tues discussion time:

- Answer all questions. Please give clear answers. If you give more than one answer, we will grade the first one, so please clearly mark out any answer you do not want us to grade.

- Use extra paper to determine your answers and copy them neatly on these sheets.

- Make sure you clearly write your name, EID, lecture and discussion times, and TA on this page.

**GOOD LUCK**

<table>
<thead>
<tr>
<th>Question</th>
<th>Points Lost</th>
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1. For each part, write the value of the expression. Be sure to list a constant of the appropriate type (e.g., put a String in double quotes, a char in single quotes, 4.0 rather than 4 for a double, etc).

(a) 

```
"ElvisPresley lives".substring(2, 6).toLowerCase()
```

(b) 

```
19/4/2 + 2*3.5
```

(c) 

```
6 + 4 * -3 + 7 + "0" + (8+2)
```

(d) 

```
(3 != 5) != (2 == 2)
```

(e) 

```
34%6%3 + 34%3
```
2. What is the output after drawSomething() is called once? Write it down precisely below.

```java
public static void drawSomething() {
    int x = 4;
    for(int i = x; i >= 0; i--) {
        drawSomething3(i);
        System.out.print('\\n');
    }
}

public static void drawSomething3(int j) {
    for (int i = 0; i < j; i++) {
        System.out.print('AA');
    }
}
```
3. What is the output produced by the following program? Write it down precisely below.

```java
public class Mystery {
    public static void main(String[] args) {
        int x = 3;
        int y = 5;
        foo(x, y);
        foo(y, x);
        foo(1, 6);
    }

    public static void foo(x, y) {
        for (int i = 1; i < x; i++)
            x *= y;
        System.out.println(x);
    }
}
```
4. What is the output produced by the following program? Write it down precisely below.

```java
public class Mystery2 {
    public static void main(String[] args) {
        guessWhat(3, 8);
        guessWhat(1, 1);
        guessWhat(16, 4);
    }

    public static void guessWhat(int x, int y) {
        if(x > y) {
            x = x -3;
            y = y + 3;
        }
        if(x < y) {
            x++; // Corrected from x += 1; to x++;
            y--;
        } else {
            x = y*3;
        }
        System.out.println(x + ", " + y);
    }
}
```
5. Write a complete program that reads a line of text from the user, and prints every other character in this String, starting with the second character. If the String entered by the user has odd length, print the middle character of the string as well.

If the user enters: “helloAworld”, the output will be:

elAol
middle character: A

If the user enters “123456”, the output will be:

246
6. Write a static method `sumThem()` that takes 2 integers m and n as its arguments, and
returns the sum of the integers between m and n (inclusive).
Sample Results:
`sumThem(2, 5)` will return 14
`sumThem(5, 2)` will return 14
`sumThem(3, -1)` will return 5
`sumThem(1, 4)` will return 10
7. Write a static method triangle() that takes an integer n as its argument, and prints a triangle like the one below which has n rows, and the first row contains 1 *, the second row contains 3 *, the third row contains 5 *, etc. Your code may print only one character at a time, i.e., you must use nested loops. When triangle(4) is called, the following triangle is printed:

*  
***  
*****  
*******
Scratch Paper