

Study questions set #2

//1. How many bytes are used for each of the following data types?

byte
short
int
long
boolean
char
float
double

//(2-3) Implement the following methods.

//2. Returns true if an odd number of arguments are true.

public static boolean oddNumTrue(**boolean** a, **boolean** b, **boolean** c)
{...}

//3. Returns the sum of squares from 1² to N², but with alternating
// sign. For example, altSumSquares(5) is 1 - 4 + 9 - 16 + 25.

public static int altSumSquares(**int** N) {...}

//(4-6) Implement the following methods with nested loops.

//Each prints a “square” of characters to the console.

//The size parameter specifies the side-length of the square.

//4. The square has '*' below the diagonal, and '\$' on and above.

// For example, loopPractice1(10) will print

// \$\$\$\$\$\$\$\$\$\$

// *\$\$\$\$\$\$\$\$\$

// **\$\$\$\$\$\$\$\$

// ***\$\$\$\$\$\$\$

// ****\$\$\$\$\$\$

// *****\$\$\$\$

// *****\$\$\$\$

// *****\$\$

// *****\$

// *****

public static void loopPractice1(**int** size) {...}

//7. You are provided with the following class definition:

```
public class Trace {  
  
    int data; //Instance field  
  
    public Trace(int dat) { //Constructor  
        data = dat; //Initialize instance field with parameter  
    }  
  
    public void bump() { //Instance method  
        data = data + 1; //Increments instance field  
    }  
  
    public void group(Trace other) { //Instance method  
        data = data * other.data; //multiplies instance fields  
    }  
  
}
```

// In the margin, write the full console output from the following:

```
public static void main(String[] args) {  
  
    Trace tr1 = new Trace(3);  
    Trace tr2 = new Trace(5);  
  
    System.out.println(tr1);  
    tr2.bump();  
    System.out.println(tr1);  
    tr1.group(tr2);  
    System.out.println(tr1);  
    tr2.group(tr1);  
    System.out.println(tr2);  
  
}
```