Worksheet W.A.4.1

Name_____

Simple I/O

1.   Read through the following code:

```
ConsoleIO keyboard = new ConsoleIO();
int num1, num2;
double dnum1, dnum2;
String word1, stringOfWords1, word2, stringOfWords2;

System.out.println("Enter a line of text: ");
num1 = keyboard.readInt();
word1 = keyboard.readToken();
dnum1 = keyboard.readDouble();
stringOfWords1 = keyboard.readLine();

System.out.println("\nEnter another line of text: ");
num2 = keyboard.readInt();
word2 = keyboard.readToken();
dnum2 = keyboard.readDouble();
stringOfWords2 = keyboard.readLine();

System.out.println();
System.out.print(word1 + "ing " + num1);
System.out.println(" and " + dnum1 + " gives you");
System.out.print(Format.right(num1 + dnum1,4,2));
System.out.println(stringOfWords1);
System.out.println();
System.out.print(word2 + "ing " + dnum2);
System.out.println(" from " + num2 + " gives you");
System.out.print(Format.right(num2 - dnum2,4,2));
System.out.println(stringOfWords2);
```

The output begins as follows (input from keyboard is in italics). Find the remaining output.

```
Enter a line of text:
2 add 1.14 as an approximation for PI

Enter another line of text:
4 subtract 0.86 as an approximation for PI
```

2.	Using the following code:

```
ConsoleIO keyboard = new ConsoleIO();
int payCheck,price;
int numFriends,remainder;
System.out.println("You've just received your first paycheck,
and");
System.out.println("you want to use it to take friends to a
movie!");
System.out.print("Enter the amount of your paycheck to the");
System.out.print(" nearest integer: ");
payCheck = keyboard.readInt();
System.out.println();
System.out.print("Enter the price of a movie rounded");
System.out.print(" to the nearest integer: ");
price = keyboard.readInt();
numFriends = payCheck/price;
System.out.print("\nYou can take " + numFriends);
System.out.println("friends to the movies!");
remainder = payCheck % price;
System.out.print("You have $" + Format.left((double)remainder,
4,2));
System.out.println(" for snacks");
```

The output begins as follows (input from keyboard is in italics). Finish the output.

```
You've just received your first paycheck, and you
want to use it to take your friends to a movie!
Enter the amount of your paycheck to the nearest integer: 125

Enter the price of a movie rounded to the nearest integer: 6
```

3.	Write code to extend #2 as follows:

- Prompt the user for the snack cost per friend
- Calculate the total snack cost
- Subtract the money left over from buying the movie tickets
- Calculate the amount each friend will have to pay for snacks

For example: using the output from #2 (see Answers) and an individual snack cost of $4.00, your code for this problem should generate the following output:

```
Enter the snack cost per friend: 4

The total cost for your snacks is $80.00
After subtracting the money left over from the movie tickets,
each friend will have to pay $3.75 for snacks.
```

4.   Find the exact output of the following code:

```java
char side, sideTop;
String first, second, third, borderX, borderO;

first = "tic";
second = "tac";
third = "toe";
side = '*';
sideTop = 'X';
borderX = "XXXXXX";
borderO = "OOOOOO";

System.out.println(side + borderX + borderO + borderX + side);
System.out.print(side + Format.left(first,6));
System.out.println(Format.right(third,12) + side);
System.out.print(side + Format.left("",6));
System.out.println(Format.center(second,6) + Format.right("",6) +
side);
System.out.print(side + Format.left(first,6));
System.out.println(Format.right(third,12) + side);
System.out.println(side + borderX + borderO + borderX + side);
```