PARAMETERS

1.   This exercise builds on the Pizza Parlor activity from W.A.6.1 where the user was only prompted for the name of its pizza parlor. Now the user is asked for the number of cheese, pepperoni, and veggie pizzas ordered as well. These integers are then passed as parameters to specific methods. The user is also prompted for its beginning banking account balance that is used in the second constructor that is introduced in this exercise. Find the exact output to the code below. Note that the main method begins in the PizzaTester2 class on the third page of this code. The output begins as follows with input from the keyboard shown in italics:

```
Please enter your name: Sam

Enter the beginning balance of your banking account: 5000

Enter the number of cheese pizzas ordered: 15

Enter the number of pepperoni pizzas ordered: 10

Enter the number of veggie pizzas ordered: 10
```

```java
import chn.util.*;

class PizzaParlor2
{
  // instance variables
  private String myName;
  private int myNumCheesePizzas; //# of cheese pizzas
  private int myNumPeppPizzas; // # of pepperonini pizzas
  private int myNumVegPizzas; //# of veggie pizzas
  private int myCheeseSupply; // ounces of cheese
  private int myPepperoniSupply;// ounces of pepperoni
  private int myVeggieSupply; // ounces of veggies
  private double myRevenue; // dollars collected
  private double myOrigAcctBal;// original bank account balance

  // constructor
  PizzaParlor2(String name)
  {
    myName = name;
    myNumCheesePizzas = 0;
    myNumPeppPizzas = 0;
    myNumVegPizzas = 0;
    myCheeseSupply = 400;
    myPepperoniSupply = 200;
    myVeggieSupply = 200;
    myRevenue = 0;
    myOrigAcctBal = 1000;
  }
```

```java
/*
 *The redundancy between these two constructors can be
 *eliminated if the first (above) was replaced with the
 *following (more advanced approach):
PizzaParlor2(String name)
{
  this(name,1000);
}
*/

//new constructor
PizzaParlor2(String name, double amount)
{
  myName = name;
  myNumCheesePizzas = 0;
  myNumPeppPizzas = 0;
  myNumVegPizzas = 0;
  myCheeseSupply = 400;
  myPepperoniSupply = 200;
  myVeggieSupply = 200;
  myRevenue = 0;
  myOrigAcctBal = amount;//only change
}

// methods
void totalCheese(int num)
{
  myNumCheesePizzas += num;
  myRevenue += num * 8;
  myCheeseSupply -= num * 12;
}

void totalPepperoni(int num)
{
  myNumPeppPizzas += num;
  myRevenue += num * 10;
  myCheeseSupply -= num *8;
  myPepperoniSupply -= num * 6;
}

void totalVeggie(int num)
{
  myNumVegPizzas += num;;
  myRevenue += num * 11;
  myCheeseSupply -= num * 8;
  myVeggieSupply -= num * 12;
}

String getName()
{
  return myName;
}

int getNumCheesePizzas()
{
  return myNumCheesePizzas;
}
```

```java
  int getNumPepperoniPizzas()
  {
    return myNumPeppPizzas;
  }

  int getNumVeggiePizzas()
  {
    return myNumVegPizzas;
  }

  int getCheeseSupply()
  {
    return myCheeseSupply;
  }

  int getPepperoniSupply()
  {
    return myPepperoniSupply;
  }

  int getVeggieSupply()
  {
    return myVeggieSupply;
  }

  double getRevenueTotal()
  {
    return myRevenue;
  }

  double getBankAccountBalance()
  {
    return myOrigAcctBal + myRevenue;
  }
}

//------------------- End of PizzaParlor2 class -------------------//
```

```java
public class PizzaTester2
{
  public static void main(String[] args)
  {
    ConsoleIO keyboard = new ConsoleIO();
    String name;
    double amount;
    int numCheese, numPepp, numVeg;

    System.out.print("Please enter your name: ");
    name = keyboard.readToken();

    System.out.print("\nEnter the beginning balance
      of your banking account: ");
    amount = keyboard.readDouble();

    System.out.print("\nEnter the number of cheese pizzas ordered: ");
    numCheese = keyboard.readInt();
    System.out.print("\nEnter the number of pepperoni pizzas ordered: ");
    numPepp = keyboard.readInt();
    System.out.print("\nEnter the number of veggie pizzas ordered: ");
    numVeg = keyboard.readInt();


    PizzaParlor2 diner = new PizzaParlor2(name, amount);

    System.out.print("\nThe name of your restaurant is: ");
    System.out.println(diner.getName() + "'s Pizza Parlor");

    diner.totalCheese(numCheese);

    diner.totalPepperoni(numPepp);

    diner.totalVeggie(numVeg);


    System.out.println("# of Cheese ordered is "
      + diner.getNumCheesePizzas());
    System.out.println("# of Pepperoni ordered is "
      + diner.getNumPepperoniPizzas());
    System.out.println("# of Veggie ordered is "
      + diner.getNumVeggiePizzas());

    System.out.print("\nRemaining supply of cheese in ounces is: ");
    System.out.println(diner.getCheeseSupply());
    System.out.print("Remaining supply of pepperoni in ounces is: ");
    System.out.println(diner.getPepperoniSupply());
    System.out.print("Remaining supply of veggies in ounces is: ");
    System.out.println(diner.getVeggieSupply());

    System.out.println("\nRevenue is $" + diner.getRevenueTotal());
    System.out.println("Bank balance is now $"
      + diner.getBankAccountBalance());
  }
}
```

2.   Enhance this code so your pizza parlor now sells "combo" pizzas. Each combo pizza will use 8 ounces of cheese, 5 ounces of pepperoni, and 8 ounces of veggies. Customers will be charged $14 for each of these combo pizzas. You'll need to add the private variable myNumComboPizzas to the PizzaParlor2 class and numCombo to the PizzaTester2 class. Also write two new methods in the PizzaParlor2 class: totalCombo and getNumComboPizzas. You may use arrows to indicate location and write your enhancements in the code above. Label each enhancement with a circled number 2. With these revisions, your output should now look as follows:

```
Please enter your name: Mary

Enter the beginning balance of your banking account: 6000

Enter the number of cheese pizzas ordered: 12

Enter the number of pepperoni pizzas ordered: 8

Enter the number of veggie pizzas ordered: 9

Enter the number of combo pizzas ordered: 10

The name of your restaurant is: Mary's Pizza Parlor
# of Cheese ordered is 12
# of Pepperoni ordered is 8
# of Veggie ordered is 9
# of Combo ordered is 10

Remaining supply of cheese in ounces is: 40
Remaining supply of pepperoni in ounces is: 102
Remaining supply of veggies in ounces is: 12

Revenue is $415.0
Bank balance is now $6415.0
```

3.   Enhance the code from #1 again, this time to account for the cost of making pizzas and the resulting profit or loss. The cost to make each pizza is as follows: $2.00 for each cheese pizza, $2.50 for each pepperoni pizza, and $2.75 for each veggie pizza. A daily overhead cost of $200.00 must be added as well. For this exercise, change the names of your classes to PizzaParlor3 and PizzaTester3 (don't forget to revise the constructors). Add the private variable myCost and methods calculateDailyCost and getDailyCost to the PizzaParlor3 class. You may use arrows to indicate location and write your enhancements in the code above. Label each enhancement with a circled number 3. With these revisions, your output should look as follows (note that no combo pizza changes from exercise #2 should be used here):

```
Please enter your name: Jose

Enter the beginning balance of your banking account: 7000

Enter the number of cheese pizzas ordered: 16

Enter the number of pepperoni pizzas ordered: 12

Enter the number of veggie pizzas ordered: 12

The name of your restaurant is: Jose's Pizza Parlor
# of Cheese ordered is 16
# of Pepperoni ordered is 12
# of Veggie ordered is 12

Remaining supply of cheese in ounces is: 16
Remaining supply of pepperoni in ounces is: 128
Remaining supply of veggies in ounces is: 56

Revenue is $380.00
Your daily cost, including overhead, is $295.00

Your profit for the day is $ 85.00
Bank balance is now $7085.00
```