

Program # 1

```
import java.util.Scanner;

public class ProgramOne {

    public static void main(String[] args) {
        // output lines of code

        System.out.println("Hello, world");
        System.out.println("Input three numbers for me to add");

        // declares variables of primitive type int
        int n1, n2, n3;

        Scanner keyboard = new Scanner(System.in);
        n1 = keyboard.nextInt();
        n2 = keyboard.nextInt();
        n3 = keyboard.nextInt();

        int numberOne = 1;

        // announce and conduct summation
        System.out.println("The sum of the numbers is ");
        System.out.println(n1 + n2 + n3);

        // announce and conduct summation thru concatenation.
        System.out.println("OR");
        System.out.println("The sum of the numbers is " + (n1+n2+n3));

    }

}
```

Program #2

```
import java.util.Scanner;
public class Loops {
```

```

public static final int SPENDING_MONEY = 100;
public static final int MAX_ITEMS = 3;

public static void main(String[] args) {

    Scanner keyboard = new Scanner(System.in);
    boolean haveMoney = true;
    int leftToSpend = SPENDING_MONEY;
    int totalSpent = 0;
    int itemNumber = 1;

    while (haveMoney && (itemNumber <= MAX_ITEMS))
    {
        System.out.println("You may buy up to " +
                           (MAX_ITEMS - itemNumber + 1)
                           + " items");

        System.out.println("costing no than $ " + leftToSpend +
                           " .");

        System.out.print("Enter cost of item#" + itemNumber + ": $");

        int itemCost = keyboard.nextInt();
        if (itemCost <= leftToSpend)
        {
            System.out.println("You may buy this item.");
            totalSpent = totalSpent + itemCost;
            System.out.println("You spent $ " + totalSpent + " so far");
            leftToSpend = SPENDING_MONEY - totalSpent;
            if (leftToSpend >0)
                itemNumber++;
            else
            {
                System.out.println("You are out of money.");
                haveMoney = false;
            }
        }
        else
            System.out.println("You cannot buy that item.");
    }

    System.out.println("You spent $ " + totalSpent + ", and are done shopping.");
}

```

Program #3

```
import java.util.Scanner;
public class Loops {
    public static final int SPENDING_MONEY = 100;
    public static final int MAX_ITEMS = 3;

    public static void main(String[] args) {

        Scanner keyboard = new Scanner(System.in);
        boolean haveMoney = true;
        int leftToSpend = SPENDING_MONEY;
        int totalSpent = 0;
        int itemNumber = 1;

        while (haveMoney && (itemNumber <= MAX_ITEMS))
        {
            System.out.println("You may buy up to "+
                               (MAX_ITEMS - itemNumber + 1)
+ "items");

            System.out.println("costing no than $ "+ leftToSpend +
```

```
    " .");  
  
    System.out.print("Enter cost of item#" + itemNumber + ": $");  
  
    int itemCost = keyboard.nextInt();  
    if (itemCost <= leftToSpend)  
    {  
        System.out.println("You may buy this item.");  
        totalSpent = totalSpent + itemCost;  
        System.out.println("You spent $ " + totalSpent + " so far");  
        leftToSpend = SPENDING_MONEY - totalSpent;  
        if (leftToSpend >0)  
            itemNumber ++;  
        else  
        {  
            System.out.println("You are out of money.");  
            haveMoney = false;  
        }  
    }  
    else  
        System.out.println("You cannot buy that item.");  
}  
  
System.out.println("You spent $ " + totalSpent + ", and are done shopping.");  
}  
}
```

Program # 5

** NOTE: PizzaTest and Pizza must be in the SAME directory

```
public class Pizza
{
    public String name;
    public double cost;
    public int Radius;
    public int slices;

    /**** CONSTRUCTOR ****/
    public Pizza(String theName, int theRadius, double theCost, int theSlices)
    {
        name = theName;
        cost = theCost;
        Radius = theRadius;
        slices = theSlices;
    }

    /*****METHODS*****/
    public String Name()
    {
        return name;
    }

    public double areaPerSlice()
    {
        double area = (3.14159)*(Radius)*(Radius); // area of a circle is pi*r^2. I found out what
        number stood for what by using basic math before
            // beginning the programming part.
        double areaPerSlice = area/slices;      // we use doubles because the test method requires
        certain no. of decimal places.
        return areaPerSlice;                  // returns one of the things we need.
    }

    public double costPerSlice()           // another thing we need in the test method.
    
```

```
{  
    double costPerSlice = cost/slices; // using basic math here and use double specifically  
    even though no of slices was an int. for efficiency  
    return (double) costPerSlice; // we use a DOUBLE return here.  
}  
  
public double costPerSquareInch() //another method that we need in the test method.  
{  
    double area = (3.14159)*(Radius)*(Radius); // finding the area as before  
    double costPerSquareInch = cost/area; // doing basic math.  
    return (double) costPerSquareInch; // returning doubles as earlier.  
}  
}
```

Program # 5

```
class PizzaTest
{
    public static void main (String args [])
    {
        Pizza myPizza = new Pizza("Veggie", 9, 20.50,10);
        System.out.printf("Your %s pizza has %.3f square inches "
            + "per slice.\n", myPizza.Name(), myPizza.areaPerSlice());
        System.out.printf("One slice costs $%.2f, which comes to " + "$%.3f per square inch.\n",
            myPizza.costPerSlice(),myPizza.costPerSquareInch() );
    }
}
```