// importing classes

import java.util.Scanner;

import java.text.DecimalFormat;

public class TipCalculatorRunner {

public static void main(String[] args) {

// creating objects

DecimalFormat formatter = new DecimalFormat("#.##");

Scanner scan = new Scanner(System.*in*);

// welcoming the user

System.*out*.println("Welcome to the tip calculator!");

// asking for user inputs and assigning the answers to variables

System.*out*.println("How many people are in your group? (Please enter an integer): ");

int people = scan.nextInt();

System.*out*.println("What's the tip percentage? Enter as an integer from 0 - 100: ");

int tip = scan.nextInt();

// create TipCalculator object

TipCalculator calc = new TipCalculator(people, tip);

System.*out*.print("Enter a cost in dollars and cents, e.g. 12.50 (-1 to end): ");

double cost = scan.nextDouble();

// prompting the user to enter the costs until -1 is entered

while (cost != -1) {

calc.addMeal(cost);

System.*out*.print("Enter a cost in dollars and cents, e.g. 12.50 (-1 to end): ");

cost = scan.nextDouble();

}

// calculating the bill and formatting the results to the correct decimal places

String formatTotalCost = formatter.format(calc.getTotalBillBeforeTip());

String formatTip = formatter.format(calc.getTipPercentage());

String formatTotalTip = formatter.format(calc.tipAmount());

String formatTipBill = formatter.format(calc.totalBill());

String formatPersonCost = formatter.format(calc.perPersonCostBeforeTip());

String formatPersonTip = formatter.format(calc.perPersonTipAmount());

String formatPersonTotal = formatter.format(calc.perPersonTotalCost());

// prints out the information about the bill

System.*out*.println("-----------------------------");

System.*out*.println("Total Bill Before Tip: " + formatTotalCost);

System.*out*.println("Tip Percentage: " + formatTip);

System.*out*.println("Total Tip: " + formatTotalTip);

System.*out*.println("Total Bill With Tip: " + formatTipBill);

System.*out*.println("Per Person Cost Before Tip: " + formatPersonCost);

System.*out*.println("Tip Per Person: " + formatPersonTip);

System.*out*.println("Total Cost Per Person: " + formatPersonTotal);

}

}

public class TipCalculator {

// instance variables

private int numPeople;

private int tipPercentage;

private double totalBillBeforeTip;

// constructor

public TipCalculator(int numPeople, int tipPercentage) {

this.numPeople = numPeople;

this.tipPercentage = tipPercentage;

totalBillBeforeTip = 0.0;

}

// getter methods

public double getTotalBillBeforeTip() {

return totalBillBeforeTip;

}

public int getTipPercentage() {

return tipPercentage;

}

// adds a meal cost to the totalBillBeforeTip

public void addMeal(double cost) {

totalBillBeforeTip += cost;

}

// calculates the tip amount and returns it

public double tipAmount() {

return totalBillBeforeTip \* (tipPercentage / 100.0);

}

// total bill including the tip amount

public double totalBill() {

return totalBillBeforeTip + tipAmount();

}

// the cost per person excluding the tip

public double perPersonCostBeforeTip() {

return totalBillBeforeTip / numPeople;

}

// tip amount per person

public double perPersonTipAmount() {

return tipAmount() / numPeople;

}

// the total cost per person including the tip amount

public double perPersonTotalCost() {

return totalBill() / numPeople;

}

}