# Level 2 Practice Programs

1. Write a program to create a basic calculator that can perform addition, subtraction, multiplication, and division. The program should ask for two numbers (floating point) and perform all the operations

**Hint =>**

1. Create a variable number1 and number 2 and take user inputs.
2. Perform Arithmetic Operations of addition, subtraction, multiplication and division and assign the result to a variable and finally print the result

**Input =>10 5**

**Output =>** The addition, subtraction, multiplication and division value of 2 numbers 10.0 and 5.0 is 15.0, 5.0, 50.0 and 2.0

import java.util.Scanner;

class Main{

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter 2 Numbers: ");

float Number1= input.nextFloat();

float Number2 = input.nextFloat();

float result1 = Number1+Number2;

float result2 = Number1-Number2;

float result3 = Number1\*Number2;

float result4 = Number1/Number2;

System.out.printf("The addition, subtraction, multiplication and division value of 2 numbers "+Number1+" and "+Number2+ " is "+result1+", "+result2+", "+result3+ " and "+result4 );

input.close();

}

}

1. Write a program that takes the base and height to find area of a triangle in square inches and square centimeters

**Hint =>** Area of a Triangle is ½ \* base \* height

**Input =>**height=12 base =5

**Output =>**Your Area of a Triangl in cm is 30.0 inches is 11.811023622047244

import java.util.Scanner;

class Main{

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Height and Base of Triangle in cm: ");

double height= input.nextDouble();

double base = input.nextDouble();

double AOTsqcm = (1.0/2.0)\*base\*height;

double AOTsqinch = AOTsqcm/2.54;

System.out.printf("Your Area of a Triangl in cm is "+AOTsqcm+" inches is "+AOTsqinch);

input.close();

}

}

1. Write a program to find the side of the square whose parameter you read from user

**Hint =>** Perimeter of Square is 4 times side

**Input =>** 20

**Output =>** The length of the side is 5.0 whose perimeter is 20.0 cm

import java.util.Scanner;

class Main{

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Perimeter in cm:");

double Perimeter= input.nextDouble();

double side = Perimeter/4.0;

System.out.printf("The length of the side is "+side+" whose perimeter is "+Perimeter+" cm");

input.close();

}

}

4.Write a program the find the distance in yards and miles for the distance provided by user in feets

**Hint =>** 1 mile = 1760 yards and 1 yard is 3 feet

**Input =>** distanceInFeet=450

**Output =>** Distance in feets is 450.0 while in yards is 150.0 and miles is 0.08522727272727272

import java.util.Scanner;

class Main{

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Distance in feets:");

double distanceInFeet= input.nextDouble();

double distanceInyard = distanceInFeet/3.0;

double distanceInmiles = distanceInyard/1760.0;

System.out.printf("Distance in feets is "+distanceInFeet+" while in yards is "+distanceInyard+" and miles is "+distanceInmiles);

input.close();

}

}

5.Write a program to input the unit price of an item and the quantity to be bought. Then, calculate the total price.

**Hint =>** NA

**Input =>45,2**

**Output =>** The total purchase price is INR 90.0 if the quantity 2.0 and unit price is INR 45.0

import java.util.Scanner;

class Main{

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter Price and Quantity: ");

double unitPrice= input.nextDouble();

double quantity = input.nextDouble();

double tpp = unitPrice\*quantity;

System.out.printf("The total purchase price is INR "+tpp+" if the quantity "+quantity+ " and unit price is INR "+unitPrice);

input.close();

}

6.Write a program to take 2 numbers and print their quotient and reminder

**Hint =>** Use division operator (/) for quotient and moduli operator (%) for reminder

**Input =>**45,8

**Output =>** The Quotient is 5 and Reminder is 5 of two number 45 and 8

import java.util.Scanner;

class Main{

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter 2 Numbers: ");

int number1= input.nextInt();

int number2 = input.nextInt();

int Quotient = number1/number2;

int Reminder = number1%number2;

System.out.printf("The Quotient is "+Quotient+" and Reminder is "+Reminder+ " of two number "+number1+" and "+number2);

input.close();

}

}

7.Write an ***IntOperation*** program by taking a, b, and c as input values and print the following integer operations a + b \*c, a \* b + c, c + a / b, and a % b + c. Please also understand the precedence of the operators.

**Hint =>**

1. Create variables a, b, c of int data type.
2. Take user input for a, b, and c.
3. Compute 3 integer operations and assign the result to a variable
4. Finally, print the result and try to understand operator precedence.

**Input =>** 7, 9, 4

**Output =>** The results of Int Operations are 43, 67, 4 and 11

import java.util.Scanner;

class Main{

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter 3 Numbers: ");

int a = input.nextInt();

int b = input.nextInt();

int c = input.nextInt();

int result1 = a + b \*c;

int result2 = a \* b + c;

int result3 = c + a / b;

int result4 = a % b + c;

System.out.printf(" The results of Int Operations are "+result1+", "+result2+", "+result3+" and "+result4);

input.close();

}

}

8.Similarly, write the ***DoubleOpt*** program by taking double values and doing the same operations.

Input:7, 9, 4

Output: The results of Int Operations are 43.0, 67.0, 4.777777777777778 and 11.0

import java.util.Scanner;

class Main{

public static void main(String[] args) {

Scanner input = new Scanner(System.in);

System.out.print("Enter 3 Numbers: ");

double a = input.nextDouble();

double b = input.nextDouble();

double c = input.nextDouble();

double result1 = a + b \*c;

double result2 = a \* b + c;

double result3 = c + a / b;

double result4 = a % b + c;

System.out.printf(" The results of Int Operations are "+result1+", "+result2+", "+result3+" and "+result4);

input.close();

}

}