**Level 1 Practice Programs**

1. **Write a program to find the age of Harry if the birth year is 2000. Assume the Current Year is 2024**

**I/P => NONE**

**O/P => Harry's age in 2024 is \_\_\_**

**CODE:**

// Define the class named agep1

public class agep1 {

public static void main(String[] args) {

// Initialize integer variable 'a' with the value 2000 (birth year)

int a = 2000;

// Initialize integer variable 'b' with the value 2024 (current year)

int b = 2024;

// Declare an integer variable 'c' to store the age difference

int c;

// Calculate the age difference by subtracting the birth year (a) from the current year (b)

c = b - a;

// Output the result to the console, showing the age difference

System.out.println("Age diff is: " + c);

}

}  
**OUTPUT:**



1. **Sam’s mark in Maths is 94, Physics is 95 and Chemistry is 96 out of 100. Find the average percent mark in PCM**

**I/P => NONE**

**O/P => Sam’s average mark in PCM is \_\_\_**

**CODE:**

// Define the class named markp2

public class markp2 {

public static void main(String[] args) {

// Initialize integer variable 'p' with the value 95 (marks in Physics)

int p = 95;

// Initialize integer variable 'm' with the value 94 (marks in Maths)

int m = 94;

// Initialize integer variable 'c' with the value 96 (marks in Chemistry)

int c = 96;

// Declare an integer variable 'd' to store the average of the marks

int d;

// Calculate the average by summing the marks and dividing by 3 (number of subjects)

d = (p + m + c) / 3;

// Output the result to the console, showing the average marks

System.out.println("The average is " + d);

}

}

**OUTPUT:**

****

1. **Create a program to convert the distance of 10.8 kilometers to miles.**

**Hint: 1 km = 1.6 miles**

**I/P => NONE**

**O/P => The distance  \_\_\_ km in miles is \_\_\_**

**CODE:**

// Define the class named kmp3

public class kmp3 {

public static void main(String[] args) {

// Initialize double variable 'a' with the value 1.6 (conversion factor for kilometers to miles)

double a = 1.6;

// Initialize double variable 'b' with the value 10.8 (distance in kilometers)

double b = 10.8;

// Declare a double variable 'd' to store the result of the multiplication

double d;

// Calculate the distance in miles by multiplying kilometers by the conversion factor

d = a \* b;

// Output the result to the console, showing the distance in miles

System.out.println("The distance +"10.8"+ km in miles is " + d);

}

}

**OUTPUT:**

****

1. **Create a program to calculate the profit and loss in number and percentage based on the cost price of INR 129 and the selling price of INR 191.**

**Hint =>**

1. **Use a single print statement to display multiline text and variables.**
2. **Profit = selling price - cost price**
3. **Profit Percentage = profit / cost price \* 100**

**I/P => NONE**

**O/P =>**

**The Cost Price is INR \_\_\_ and Selling Price is INR \_\_\_**

**The Profit is INR \_\_\_ and the Profit Percentage is \_\_\_**

**CODE:**

// Define the class named profitp4

public class profitp4 {

public static void main(String[] args) {

// Initialize integer variable 'cost' with the value 129 (cost price)

int cost = 129;

// Initialize integer variable 'selling' with the value 191 (selling price)

int selling = 191;

// Declare an integer variable 'profit' to store the profit value

int profit;

// Calculate profit by subtracting cost from selling price

profit = selling - cost;

// Calculate profit percentage by dividing profit by cost, then multiplying by 100

// Cast profit and cost to double for precise calculation of percentage

double profit\_percentage = ((double) profit / (double) cost) \* 100;

// Output the cost and selling price to the console

System.out.println("The Cost Price is INR " + cost + " and Selling Price is INR " + selling);

// Output the calculated profit and profit percentage to the console

System.out.println("The Profit is INR " + profit + " and the Profit Percentage is " + profit\_percentage);

}

}

**OUTPUT:**

****

1. **Suppose you have to divide 14 pens among 3 students equally. Write a program to find how many pens each student will get if the pens must be divided equally. Also, find the remaining non-distributed pens.**

**Hint =>**

1. **Use Modulus Operator (%) to find the reminder.**
2. **Use Division Operator to find the Quantity of pens**

**I/P => NONE**

**O/P => The Pen Per Student is \_\_\_ and the remaining pen not distributed is \_\_\_**

**CODE:**

// Define the class named penp5

public class penp5 {

public static void main(String[] arrg) {

// Initialize the total number of pens to 14

int Total\_pens = 14;

// Initialize the number of students to 3

int No\_of\_student = 3;

// Declare variables for remaining pens and divided pens

int Remaining\_pen, divided\_pen;

// Calculate the remaining pens after dividing by the number of students

Remaining\_pen = Total\_pens % No\_of\_student;

// Calculate the number of pens each student gets by subtracting the remaining pens from the total and dividing by the number of students

divided\_pen = (Total\_pens - Remaining\_pen) / No\_of\_student;

// Output the number of pens per student and the remaining pens not distributed

System.out.println("The Pen Per Student is " + divided\_pen + " and the remaining pen not distributed is " + Remaining\_pen);

}

}

**OUTPUT:**

****

1. **The University is charging the student a fee of INR 125000 for the course. The University is willing to offer a discount of 10%. Write a program to find the discounted amount and discounted price the student will pay for the course.**

**Hint =>**

1. **Create a variable named fee and assign 125000 to it.**
2. **Create another variable discountPercent and assign 10 to it.**
3. **Compute discount and assign it to the discount variable.**
4. **Compute and print the fee you have to pay by subtracting the discount from the fee.**

**O/P => The discount amount is INR \_\_\_ and final discounted fee is INR \_\_\_**

**CODE:**

// Define the class named feep6

public class feep6 {

public static void main(String[] arrg) {

// Initialize the original fee to 125000

int fee = 125000;

// Initialize the discount percentage to 10

int discountpercentage = 10;

// Declare a variable to store the calculated discount amount

double discountvariable;

// Calculate the discount amount based on the discount percentage

discountvariable = ((double)(discountpercentage) / 100) \* fee;

// Output the discount amount and the final fee after applying the discount

System.out.println("The discount amount is INR " + discountvariable + " and final discounted fee is INR " + (fee - discountvariable));

}

}

**OUTPUT:**

****

1. **Write a Program to compute the volume of Earth in km^3 and miles^3**

**Hint => Volume of a Sphere is (4/3) \* pi \* r^3 and radius of earth is 6378 km**

**O/P => The volume of earth in cubic kilometers is \_\_\_\_ and cubic miles is \_\_\_\_**

**CODE:**

// Define the class named volumep7

public class volumep7 {

public static void main(String[] arrg) {

// Declare and initialize the variables for volume calculation

double volumeofsphere, pi = 22.0 / 7, radius = 6378.0, milesconversion = 0.621371, volumeofsphereinmiles;

// Calculate the volume of the sphere using the formula (4/3) \* pi \* r^3

volumeofsphere = (4.0 / 3.0) \* pi \* radius \* radius \* radius;

// Convert the volume from cubic kilometers to cubic miles

volumeofsphereinmiles = volumeofsphere \* milesconversion \* milesconversion \* milesconversion;

// Output the volume in cubic kilometers and cubic miles

System.out.println("The volume of earth in cubic kilometers is " + volumeofsphere + " and cubic miles is " + volumeofsphereinmiles);

}

}

**OUTPUT:**

****

1. **Create a program to convert distance in kilometers to miles.**

**Hint =>**

1. **Create a variable km and assign type as double as in double km;**
2. **Create Scanner Object to take user input from Standard Input that is the Keyboard as in Scanner input = new Scanner(System.in);**
3. **Use Scanner Object to take user input for km as in km = input.nextInt();**
4. **Use 1 mile = 1.6 km formulae to calculate miles and show the output**

**I/P => km**

**O/P => The total miles is \_\_\_ mile for the given \_\_\_ km**

**CODE:**

// Import the Scanner class for taking user input

import java.util.Scanner;

// Define the class named kmp8

public class kmp8 {

public static void main(String[] arrg) {

// Declare the variables for km and miles conversion

double km, kminmiles;

// Create a Scanner object to read input from the user

Scanner input = new Scanner(System.in);

// Read the distance in kilometers from the user

km = input.nextDouble();

// Convert kilometers to miles (1 km = 0.625 miles)

kminmiles = km \* 0.625;

// Output the result showing the distance in miles

System.out.println("The total miles is " + kminmiles + " mile for the given " + km + " km");

}

}

**OUTPUT:**

****

1. **Write a new program similar to the program # 6 but take user input for Student Fee and University Discount**

**Hint =>**

1. **Create a variable named fee and take user input for fee.**
2. **Create another variable discountPercent and take user input.**
3. **Compute the discount and assign it to the discount variable.**
4. **Compute and print the fee you have to pay by subtracting the discount from the fee.**

**I/P => fee, discountPrecent**

**O/P => The discount amount is INR \_\_\_ and final discounted fee is INR \_\_\_**

**CODE:**

// Import the Scanner class to allow user input

import java.util.Scanner;

public class feep9 {

public static void main(String[] arrg) {

// Declare variables for fee and discount percentage

double fee, discountpercentage;

// Create a Scanner object to read user input

Scanner input = new Scanner(System.in);

// Read the fee and discount percentage from the user

fee = input.nextDouble();

discountpercentage = input.nextDouble();

// Calculate the discount amount

double discountvariable;

discountvariable = ((double)(discountpercentage) / 100) \* fee;

// Print the discount amount and final discounted fee

System.out.println("The discount amount is INR " + discountvariable + " and final discounted fee is INR " + (fee - discountvariable));

}

}

**OUTPUT:**

****

1. **Write a program that takes your height in centimeters and converts it into feet and inches**

**Hint => 1 foot = 12 inches and 1 inch = 2.54 cm**

**I/P => height**

**O/P => Your Height in cm is \_\_\_ while in feet is \_\_\_ and inches is \_\_\_**

**CODE:**

// Import the Scanner class to allow user input

import java.util.Scanner;

public class foot10 {

public static void main(String[] arrg) {

// Declare variables for height, inches, and feet

double height, inches, foots;

// Create a Scanner object to read user input

Scanner input = new Scanner(System.in);

// Read the height in cm from the user

height = input.nextDouble();

// Convert height from cm to inches

inches = height / 2.54;

// Convert inches to feet

foots = inches / 12;

// Print the height in cm, inches, and feet

System.out.println("Your Height in cm is " + height + " while in feet is " + foots + " and inches is " + inches);

}

}

**OUTPUT:**

****