

Problem Solving

1. Suppose you have two variables A and B. Now write a C program to find out result of the following formula.

$$\frac{(A+B)(A-B)}{AB}$$

Sample Input:

A = 10

B = 5

Sample output:

Result = 1.50

2. X and Y are two variables. The values of X and Y are taken from the user. Now find the remainder when X is divided by Y.

Sample Input:

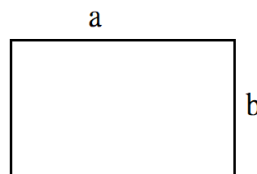
X = 7

Y = 5

Sample output:

Remainder is 2.

3. Write a C program to find and print the Area of a rectangle where the values of length and width are user input.



Sample Input:

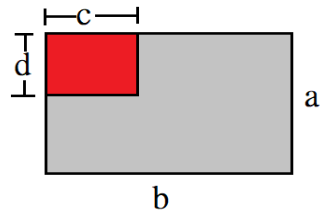
Length of the rectangle = 5

Width of the rectangle = 3

Sample output:

Area of the rectangle = 15

4. Write a C program to find the area of the Gray part from the following figure. Take values of a, b, c and d from user.



Sample Input:

Enter length and width of the first rectangle:

a= 8

b= 6

Enter length and width of the second rectangle:

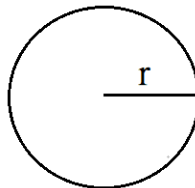
c= 4

d= 3

Sample output:

Area of the Gray part = 36

5.



Write a C program to input the radius of a circle and output Diameter, Circumference and Area of the Circle. formula-

Diameter = $2r$

Circumference = $2\pi r$

Area = πr^2

Sample Input:

Enter value of Radius : 5

Sample output:

Diameter = 10

Circumference = 31.416

Area = 78.54

6. Write a C program to convert length from Meter to Centimeter and Centimeter to Kilometer.

$$1 \text{ km} = 1000 \text{ m} = 100000 \text{ cm}$$

Sample Input:

Enter a value in meter 5

Sample output:

5 m = 500 cm

500 cm = 0.005 km

7. Write a C program to input two angles of a triangle and find the third angle. The sum of three angles of a triangle is 180° .

Sample Input:

First angle = 60

Second angle = 40

Sample output:

Third angle = 80

8. Write a C program to convert Temperature from Celsius to Fahrenheit.
formula:

$$F = \left(C \times \frac{9}{5} \right) + 32$$

Sample Input:

Input temperature in Fahrenheit : 26

Sample output:

Temperature in Celsius : 78.8

9. A seller makes a profit of “P%” by selling a product at “X” price. Write a C program to find the cost price of that product.

formula:

$$\text{Cost Price} = (100 \times \text{Selling Price}) / (100 + \text{Profit})$$

Sample Input:

Enter Profit: 15

Enter Selling price: 276

Sample output:

Cost Price: 240

10. Write a C program to input principle, time and rate (P, T, R) from user and find Simple Interest.

formula:

$$\text{Simple Interest} = \frac{\text{Principle} \times \text{Time} \times \text{Rate}}{100}$$

Sample Input:

Enter Principle: 1000

Enter Time: 6

Enter Rate: 4.5

Sample output:

Simple Interest: 270

11. Write a C program to input number of days from user and convert it to years and weeks and days.

1 year = 365 days

1 week = 7days

Sample Input:

Enter Number of Days: 425

Sample output:

Years = 1

Weeks = 8

Days = 4