1- Write a program to print the sum of two integers

اكتب برنامج يطبع مجموع رقمين

Output

```
Sum: 15
```

Solution

```c
#include <stdio.h>

int main() {
    int num1 = 10 , num2 = 5;
    // Print the sum of num1 and num2 directly
    printf("Sum: %d\n", num1 + num2);

    return 0;
}
```

2-Write a program to prints the result of sum two numbers and records the result in a third variable:

اكتب برنامجاً لطباعة نتيجة جمع رقمين وتسجيل النتيجة في متغير ثالث:

Output

```
The sum of 10 and 20 is: 30
```

Solution

```c
#include <stdio.h>

int main() {
    // Define variables and initialize them with default values
    int num1 = 10;
    int num2 = 20;
    int sum;

    // Calculate the sum
    sum = num1 + num2;

    // Print the result
    printf("The sum of %d and %d is: %d\n", num1, num2, sum);

    return 0;
}
```

3- Write a program that involves four numbers. Calculate the sum of the first three numbers and then subtract the fourth number from the sum. Print both the sum of the first three numbers and the result after subtracting the fourth number.

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Output

```
The sum of numbers 5, 8, and 3 is: 16
Subtracting number 2 from the sum is: 14
```

Solution

```c
//www.gammal.tech

#include <stdio.h>

int main() {
  // Define variables
  int num1 = 5;
  int num2 = 8;
  int num3 = 3;
  int num4 = 2;
  int sum, result;

  // Calculate the sum of numbers 1, 2, and 3
  sum  =  num1 + num2 + num3;

  // Subtract number 4 from the sum
  result = sum - num4;

  // Print the results
  printf("The sum of numbers 5, 8, and 3 ts: %d\n", sum);
  printf("Subtracting number 2 from the sum is: %d\n", result);

  return 0;
}
```

4- Write a program that prints the result of multiplying three numbers

برنامج يطبع ضرب ثلاث ارقام

Output

```
The result of multiplying 2, 3, and 4 is: 24
```

Solution

```c
#include <stdio.h>

int main() {
    // Define variables and initialize them with default values
    int num1 = 2;   // You can change the value of num1 as desired
    int num2 = 3;   // You can change the value of num2 as desired
    int num3 = 4;   // You can change the value of num3 as desired
    int result;

    // Calculate the product
    result = num1 * num2 * num3;

    // Print the result
    printf("The result of multiplying %d, %d, and %d is: %d\n", num1, num2, num3, result);

    return 0;
}
```

5- Write a program with two variables, multiply them, and print the result. Then add them and print the sum.

اكتب برنامجًا بمتغيرين، ثم ضربهما، ثم اطبع النتيجة. ثم قم بجمعهما وطباعة الناتج.

Output

```
The product of 4 and 7 is: 28
The sum of 4 and 7 is: 11
```

Solution

```c
#include <stdio.h>

int main() {
    // Define two variables and initialize them with values
    int num1 = 4;
    int num2 = 7;

    // Multiply the variables and print the result
    int product = num1 * num2;
    printf("The product of %d and %d is: %d\n", num1, num2, product);

    // Add the variables and print the sum
    int sum = num1 + num2;
    printf("The sum of %d and %d is: %d\n", num1, num2, sum);

    return 0;
}
```

6- Write a program that calculates the area of a rectangle. Use two variables for the length and width of the rectangle. Print the result.

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Output

```
The area of the rectangle with length 5 and width 8 is: 40
```

Solution

```c
#include <stdio.h>

int main() {
    // Define two variables for the length and width of the rectangle, and initialize them with
default values
    int length = 5;    // You can change the value of length as desired
    int width = 8;     // You can change the value of width as desired
    int area;

    // Calculate the area of the rectangle
    area = length * width;

    // Print the result
    printf("The area of the rectangle with length %d and width %d is: %d\n", length, width, area);

    return 0;
}
```

7- Write a program that calculates the perimeter of a square.

Use a variable for the side length of the square. Print the result.

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Output

```
The perimeter of the square with side length 6 is: 24
```

Solution

```c
#include <stdio.h>

int main() {
    // Define a variable for the side length of the square and initialize it with a default value
    int sideLength = 6;    // You can change the value of sideLength as desired
    int perimeter;

    // Calculate the perimeter of the square
    perimeter = 4 * sideLength;

    // Print the result
    printf("The perimeter of the square with side length %d is: %d\n", sideLength, perimeter);

    return 0;
}
```

8- Write a program that calculates both the area and perimeter of a rectangle. Use two variables for the length and width of the rectangle. Print the results.

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Output

```
The area of the rectangle with length 5 and width 8 is: 40
The perimeter of the rectangle with length 5 and width 8 is: 26
```

Solution

```c
#include <stdio.h>

int main() {
    // Define two variables for the length and width of the rectangle and initialize them with
default values
    int length = 5;    // You can change the value of length as desired
    int width = 8;     // You can change the value of width as desired
    int area, perimeter;

    // Calculate the area and perimeter of the rectangle
    area = length * width;
    perimeter = 2 * (length + width);

    // Print the results
    printf("The area of the rectangle with length %d and width %d is: %d\n", length, width, area);
    printf("The perimeter of the rectangle with length %d and width %d is: %d\n", length, width,
perimeter);

    return 0;
}
```

9- Write a program that calculates the numerical complement of a given number with respect to 10. For example, the complement of 6 with respect to 10 is 4.

اكتب برنامجًا يحسب المكمل العددي لعدد معين بالنسبة إلى 10. على سبيل المثال، مكمل 6 بالنسبة إلى 10 هو 4.

Output

```
The numerical complement of 6 with respect to 10 is: 4
```

Solution

```c
#include <stdio.h>

int main() {
    // Value of the number
    int number = 6;

    // Calculate the numerical complement of the number with respect to 10
    int complement = 10 - number;

    // Print the result
    printf("The numerical complement of %d with respect to 10 is: %d\n", number, complement);

    return 0;
}
```

10 - Write program that swaps the values of two numbers

اكتب برنامج يقوم بتبديل قيم رقمين

Output

```
Before swapping: num1 = 5, num2 = 8
After swapping: num1 = 8, num2 = 5
```

Solution

```c
#include <stdio.h>

int main() {
    // Define two variables
    int num1 = 5;   // You can change the value of num1 as desired
    int num2 = 8;   // You can change the value of num2 as desired
    int temp;

    // Before swapping
    printf("Before swapping: num1 = %d, num2 = %d\n", num1, num2);

    // Use a temporary variable (temp) to swap the values
    temp = num1;
    num1 = num2;
    num2 = temp;

    // After swapping
    printf("After swapping: num1 = %d, num2 = %d\n", num1, num2);

    return 0;
}
```