Q1: Subtract two matrices

```
#include <stdio.h>
int main() {
	int a[2][2], b[2][2], c[2][2];
	printf("Enter elements of first 2x2 matrix:\n");
	for(int i=0;i<2;i++)
		for(int j=0;j<2;j++)
			scanf("%d",&a[i][j]);
	printf("Enter elements of second 2x2 matrix:\n");
	for(int i=0;i<2;i++)
		for(int j=0;j<2;j++)
			scanf("%d",&b[i][j]);
	printf("Subtraction of two matrices:\n");
	for(int i=0;i<2;i++){
		for(int j=0;j<2;j++){
			c[i][j] = a[i][j] - b[i][j];
			printf("%d ", c[i][j]);
		}
		printf("\n");
	}
	return 0;
}
```

```
Output:

Enter elements of first 2x2 matrix: 10 5 3 8

Enter elements of second 2x2 matrix: 2 1 0 4

Subtraction of two matrices:	8 4

				3 4
```

Q2: Compute the GCD of two numbers

```
#include <stdio.h>
int main() {
	int a, b;
	printf("Enter two numbers: ");
	scanf("%d %d", &a, &b);
	while(a != b){
		if(a > b)
			a -= b;
		else
			b -= a;
	}
	printf("GCD = %d", a);
	return 0;
}
```

```
Output:

Enter two numbers: 48 18

GCD = 6
```

Q3: Delete an element from an array

```
#include <stdio.h>
int main() {
	int arr[10], n, pos;
	printf("Enter number of elements: ");
	scanf("%d", &n);
	printf("Enter elements: ");
	for(int i=0;i<n;i++) scanf("%d",&arr[i]);
	printf("Enter position to delete: ");
	scanf("%d", &pos);
	for(int i=pos-1;i<n-1;i++)
		arr[i]=arr[i+1];
	n--;
	printf("Array after deletion: ");
	for(int i=0;i<n;i++) printf("%d ", arr[i]);
	return 0;
}
```

```
Output:

Enter number of elements: 5

Enter elements: 10 20 30 40 50

Enter position to delete: 3

Array after deletion: 10 20 40 50
```

Q4: Calculate the perimeter of a square

```
#include <stdio.h>
int main() {
	float side;
	printf("Enter side of square: ");
	scanf("%f", &side);
	printf("Perimeter = %.2f", 4*side);
	return 0;
}
```

```
Output:

Enter side of square: 12.5

Perimeter = 50.00
```

Q5: Compute the LCM of two numbers

```
#include <stdio.h>
int main() {
	int a,b,max;
	printf("Enter two numbers: ");
	scanf("%d%d",&a,&b);
	max = (a > b) ? a : b;
	while(1){
		if(max%a==0 && max%b==0){
			printf("LCM = %d", max);
			break;
		}
		++max;
	}
	return 0;
}
```

```
Output:

Enter two numbers: 15 20

LCM = 60
```

Q6: Insert an element at a specific position in an array

```
#include <stdio.h>
int main() {
	int arr[20], n, pos, val;
	printf("Enter number of elements: ");
	scanf("%d", &n);
	printf("Enter elements: ");
	for(int i=0;i<n;i++) scanf("%d",&arr[i]);
	printf("Enter position and value to insert: ");
	scanf("%d%d",&pos,&val);
	for(int i=n;i>=pos;i--)
		arr[i]=arr[i-1];
	arr[pos-1]=val;
	n++;
	printf("Array after insertion: ");
	for(int i=0;i<n;i++) printf("%d ", arr[i]);
	return 0;
}
```

```
Output:

Enter number of elements: 4

Enter elements: 10 20 40 50

Enter position and value to insert: 3 30

Array after insertion: 10 20 30 40 50
```

Q7: Reverse a given string

```
#include <stdio.h>
#include <string.h>
int main() {
	char str[50];
	printf("Enter string: ");
	gets(str);
	strrev(str);
	printf("Reversed string: %s", str);
	return 0;
}
```

```
Output:

Enter string: Hello World

Reversed string: dlroW olleH
```

Q8: Check whether a number is perfect

```
#include <stdio.h>
int main() {
	int n, sum=0;
	printf("Enter number: ");
	scanf("%d",&n);
	for(int i=1;i<n;i++)
		if(n%i==0)
			sum+=i;
	if(sum==n) printf("Perfect number");
	else printf("Not perfect");
	return 0;
}
```

```
Output:

Enter number: 6

Perfect number
```

Q9: Find the largest of three numbers

```
#include <stdio.h>
int main() {
	int a,b,c;
	printf("Enter three numbers: ");
	scanf("%d%d%d",&a,&b,&c);
	if(a>=b && a>=c)
		printf("%d is largest", a);
	else if(b>=a && b>=c)
		printf("%d is largest", b);
	else
		printf("%d is largest", c);
	return 0;
}
```

```
Output:

Enter three numbers: 15 22 10

22 is largest
```

Q10: Find the largest of five numbers

```
#include <stdio.h>
int main() {
	int a[5], max;
	printf("Enter 5 numbers: ");
	for(int i=0;i<5;i++)
		scanf("%d",&a[i]);
	max=a[0];
	for(int i=1;i<5;i++)
		if(a[i]>max) max=a[i];
	printf("Largest = %d", max);
	return 0;
}
```

```
Output:

Enter 5 numbers: -5 12 30 8 19

Largest = 30
```

Q11: Search for an element in an array

```
#include <stdio.h>
int main() {
	int a[10], n, key, found=0;
	printf("Enter number of elements: ");
	scanf("%d",&n);
	printf("Enter elements: ");
	for(int i=0;i<n;i++) scanf("%d",&a[i]);
	printf("Enter element to search: ");
	scanf("%d",&key);
	for(int i=0;i<n;i++){
		if(a[i]==key){
			printf("Found at position %d", i+1);
			found=1;
			break;
		}
	}
	if(!found) printf("Not found");
	return 0;
}
```

```
Output:

Enter number of elements: 5

Enter elements: 2 8 5 12 7

Enter element to search: 5

Found at position 3
```

Q12: Convert meters to centimeters

```
#include <stdio.h>
int main() {
	float m;
	printf("Enter meters: ");
	scanf("%f",&m);
	printf("Centimeters = %.2f", m*100);
	return 0;
}
```

```
Output:

Enter meters: 3.45

Centimeters = 345.00
```

Q13: Print the first N natural numbers in reverse

```
#include <stdio.h>
int main() {
	int n;
	printf("Enter N: ");
	scanf("%d",&n);
	for(int i=n;i>=1;i--)
		printf("%d ", i);
	return 0;
}
```

```
Output:

Enter N: 7

7 6 5 4 3 2 1
```

Q14: Find the smallest element in a 1D array

```
#include <stdio.h>
int main() {
	int a[10], n, min;
	printf("Enter number of elements: ");
	scanf("%d",&n);
	printf("Enter elements: ");
	for(int i=0;i<n;i++) scanf("%d",&a[i]);
	min=a[0];
	for(int i=1;i<n;i++)
		if(a[i]<min) min=a[i];
	printf("Smallest = %d", min);
	return 0;
}
```

```
Output:

Enter number of elements: 6

Enter elements: 15 8 22 -4 1 10

Smallest = -4
```

Q15: Check whether a number is strong

```
#include <stdio.h>
int fact(int n){
	int f=1;
	for(int i=1;i<=n;i++) f*=i;
	return f;
}
int main(){
	int n, temp, sum=0;
	printf("Enter number: ");
	scanf("%d",&n);
	temp=n;
	while(n>0){
		sum+=fact(n%10);
		n/=10;
	}
	if(sum==temp) printf("Strong number");
	else printf("Not strong");
	return 0;
}
```

```
Output:

Enter number: 145

Strong number
```