Questions:

Q.1 Write a Program to find the length of a 1D array.

For example,
Input:
Enter array size: 5
Enter array elements:
a[0] = 3
a[1] = 7
a[2] = 1
a[3] = 8
a[4] = 6
Output:
Length of an Array: 5

Ans:

```
// Online C compiler to run C program online
#include <stdio.h>

int main() {
    int size, i;

    printf("Enter array size: ");
    scanf("%d", &size);

    int array[size];
    printf("Enter array elements:\n");
    for (i = 0; i < size; i++) {
        printf("a[%d] = ", i);
        scanf("%d", &array[i]);
    }
    int length = sizeof(array) / sizeof(array[0]);

    printf("Length of array: %d\n", length);

    return 0;
}
```

o/p:

```
Enter array size: 5
Enter array elements:
```

a[0] = 3
a[1] = 7
a[2] = 1
a[3] = 8
a[4] = 6
Length of array: 5

=== Code Execution Successful ===

Q.2 Write a Program to find the average of a 1D array.
For example,
Input:
Enter array size: 5
Enter array elements:
a[0] = 12
a[1] = 42
a[2] = 18
a[3] = 50
a[4] = 26

Output:
Average of an Array: 29.6

Ans:

```
// Online C compiler to run C program online
#include <stdio.h>

int main() {
    int size, sum = 0;
    float average;

    printf("Enter array size: ");
    scanf("%d", &size);

    int arr[size];

    printf("Enter array elements:\n");
    for (int i = 0; i < size; i++) {
        printf("a[%d] = ", i);
        scanf("%d", &arr[i]);
        sum += arr[i];
    }
```

```
    average = (float)sum / size;
    printf("\nAverage of an Array: %.1f\n", average);

    return 0;
}
```

o/p:

```
Enter array size: 5
Enter array elements:
a[0] = 12
a[1] = 42
a[2] = 18
a[3] = 50
a[4] = 26

Average of an Array: 29.6


=== Code Execution Successful ===
```

Q.3 Write a Program to perform the addition operation of two 1D arrays & store it in another array. Keep in mind that both array sizes must be the same.

For example,

Input:

```
Enter array size: 5

Enter array A's elements:
a[0] = 7
a[1] = 4
a[2] = 9
a[3] = 5
a[4] = 2

Enter array B's elements:
b[0] = 1
b[1] = 3
b[2] = 1
b[3] = 7
b[4] = 3
```

Output:

Array C is: 8, 7, 10, 12, 5

Ans:

```
// Online C compiler to run C program online
#include <stdio.h>

int main() {
    int size;

    printf("Enter array size: ");
    scanf("%d", &size);

    int arrayA[size], arrayB[size], arrayC[size];

    printf("\nEnter array A's elements:\n");
    for (int i = 0; i < size; i++) {
        printf("a[%d] = ", i);
        scanf("%d", &arrayA[i]);
    }

    printf("\nEnter array B's elements:\n");
    for (int i = 0; i < size; i++) {
        printf("b[%d] = ", i);
        scanf("%d", &arrayB[i]);
    }

    printf("\nOutput:\n");
    printf("Array C is: ");
    for (int i = 0; i < size; i++) {
        arrayC[i] = arrayA[i] + arrayB[i];
        printf("%d", arrayC[i]);
        if (i != size - 1) {
            printf(", ");
        }
    }
    printf("\n");

    return 0;
}
```

o/p:

Enter array size: 5

Enter array A's elements:
a[0] = 7
a[1] = 4
a[2] = 9
a[3] = 5
a[4] = 2

Enter array B's elements:
b[0] = 1
b[1] = 3
b[2] = 1
b[3] = 7
b[4] = 3

Output:
Array C is: 8, 7, 10, 12, 5

=== Code Execution Successful ===