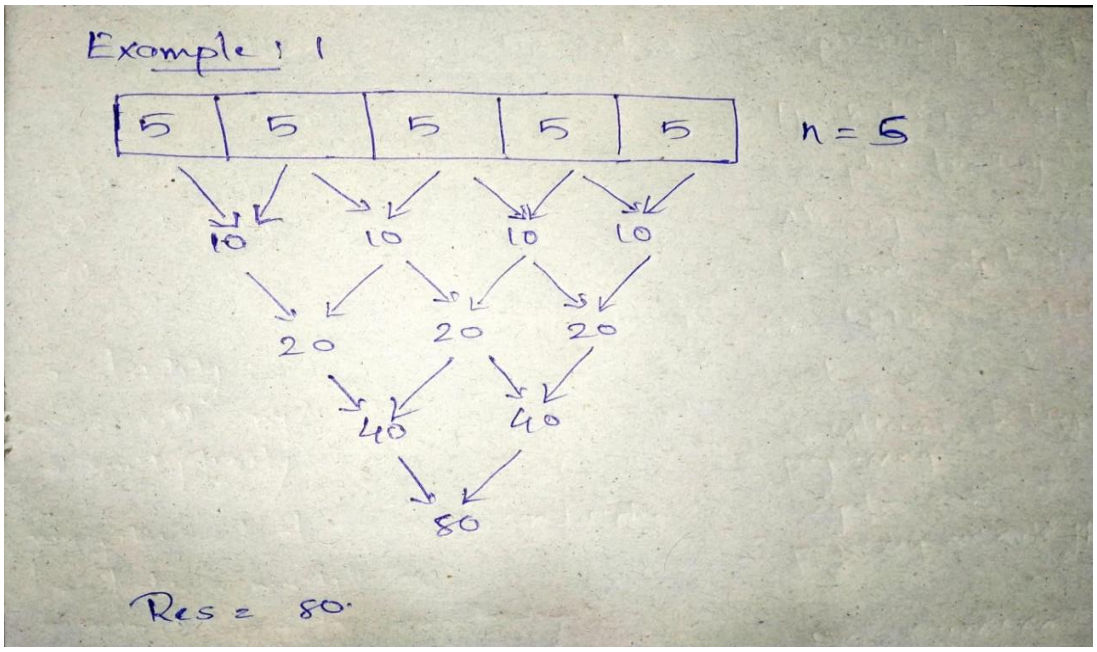
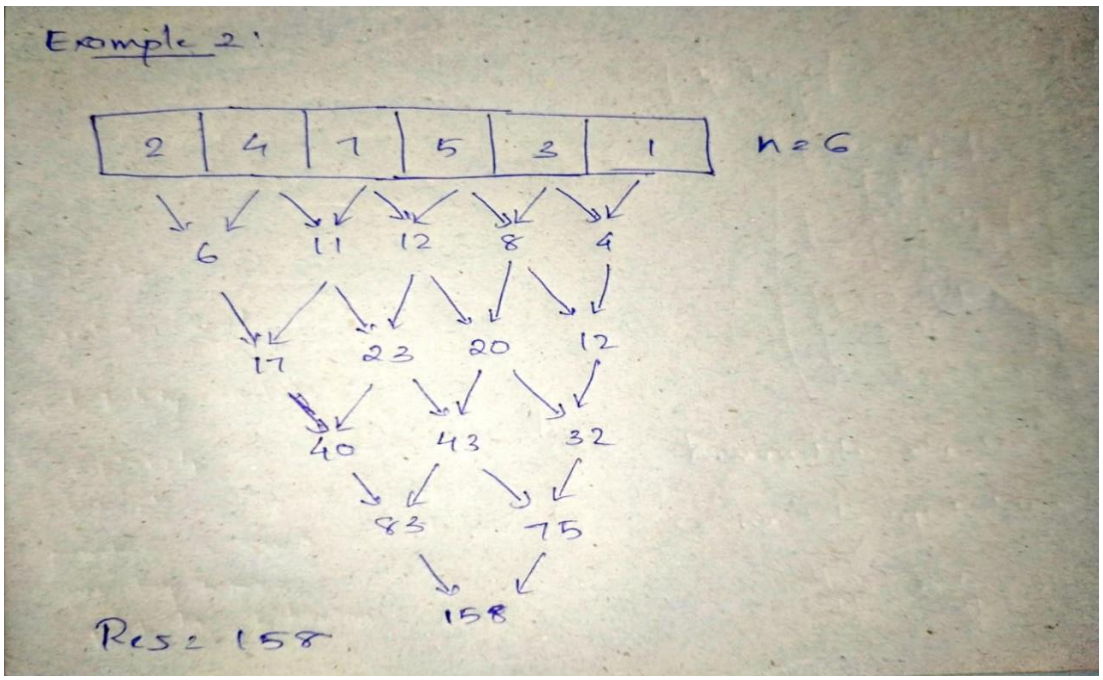
Problem:

[Grab your reader's attention with a great quote from the document or use this space to emphasize a key point. To place this text box anywhere on the page, just drag it.]

Example 1:



Example 2:



Program:

```
//Libraries
#include <stdio.h>  //standard input-output library
#include <stdlib.h> //standard library

int findsum(int *arr,int n){    //function for processing the current array with size n

   if(n==1)              //checks if the array have have only one element, which is the result
      return arr[0];
   int i,j,ind=0;

    //dynamically allocate an array of size n-1 , to store the results of current processing
   int *new_arr=(int *)malloc((n-1)*sizeof(int));

   for(i=0;i<n-1;i++){
      j=i+1;
      //find sum of array values at i and j indices in each looping and assigns to the new_array
      new_arr[ind++]=(arr[i]+arr[j]);
   }
   return findsum(new_arr,n-1);     //return the result in each function call


}
//main function
void main(){
   int n;
   printf("\nEnter the no of elements:");
   scanf("%d",&n);
   int *arr=(int *)malloc(n*sizeof(int)); //allocate an array of size n dynamically
```

```
    printf("Enter elements:");
    for(int i=0;i<n;i++)
        scanf("%d",&arr[i]);    //read n elements from user
    int res=findsum(arr,n); //function call for initialising the calculation process
    printf("%d",res);   //print final result
}
```

Result:

Example 1:

Enter the no of elements:5

Enter elements:5 5 5 5 5

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Example 2:

Enter the no of elements:6

Enter elements:2 4 7 5 3 1

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