[How to pass the number of elements of an array to a function](https://stackoverflow.com/questions/55551722/how-to-pass-the-number-of-elements-of-an-array-to-a-function)

I would like to pass a n number of elements part of an array to a function in order to calculate the average. Essentialy i would like to keep the number of elements dynamic in the code so that a custom number can be entered.

float average(float num[]);

int main()

{

int n,i,k;

float num[n];

printf("Enter the numbers of elements: ");

scanf("%d",&k);

for(i = 0; i < k; ++i)

{

printf("%d. value: ", i+1);

scanf("%f", &num[i]);

}

printf("Average = %.2lf",average(num));

return 0;

}

float average(float num[])

{

int i,n;

float sum = 0.0, avg;

n = sizeof(num)/sizeof(int);

for(i = 0; i < n; ++i)

{

sum += num[i];

}

avg = sum / n;

return avg;

}

the n = sizeof(num)/sizeof(int); is somehow not passing the correct number of elements. I tried to dig around on the web and tried different options but nothing seem work correctly. I guess this is because I am not passing the array to a function correctly.. but do not know how, please advise, many thanks

**Ans:**

In *main*

float num[n];

must be moved under because *n* is not initialized, so :

int n,i,k;

float num[n];

printf("Enter the numbers of elements: ");

scanf("%d",&k);

must be like

int i,k;

printf("Enter the numbers of elements: ");

if (scanf("%d",&k) != 1) {

puts("invalid size");

return -1;

}

float num[k];

In *average* :

n = sizeof(num)/sizeof(int);

is wrong because the number of elements in *num* is unknown, so sizeof(num) values the size of a pointer, you need to give the number of element in parameter

float average(float num[], int n);

and in *main*

printf("Average = %.2lf",average(num, k));

and

float average(float num[], int n)

{

int i;

float sum = 0.0;

for(i = 0; i < n; ++i)

{

sum += num[i];

}

return sum / n;

}

