

```
1  #include <stdio.h>
2
3  int main(void)
4  {
5      // variable declaration
6      int iArray_One[5];
7      int iArray_Two[5][3];
8      int iArray_Three[100][100][5];
9
10     int num_rows_2D;
11     int num_columns_2D;
12
13     int num_rows_3D;
14     int num_columns_3D;
15     int depth_3D;
16
17     // code
18     printf("\n\n");
19     printf("Size of 1-D integer array iArray_One = %lu\n", sizeof(iArray_One));
20     printf("Number of elements in 1-D integer array iArray_One = %lu\n", (sizeof  ↗
        (iArray_One) / sizeof(int)));
21
22     printf("\n\n");
23     printf("Size of 2-D integer array iArray_Two = %lu\n", sizeof(iArray_Two));
24
25     printf("Number rows in 2-D integer array iArray_Two = %lu\n", (sizeof  ↗
        (iArray_Two) / sizeof(iArray_Two[0])));
26     num_rows_2D = (sizeof(iArray_Two) / sizeof(iArray_Two[0]));
27
28     printf("Number of elements (columns) in each row in 2-D integer array  ↗
        iArray_Two = %lu\n", (sizeof(iArray_Two[0]) / sizeof(iArray_Two[0][0])));
29     num_columns_2D = (sizeof(iArray_Two[0]) / sizeof(iArray_Two[0][0]));
30
31     printf("Number of elements in total in 2-D Array iArray_Two = %d\n",  ↗
        (num_rows_2D * num_columns_2D));
32
33     printf("\n\n");
34
35     printf("\n\n");
36     printf("Size of 3-D integer array iArray_Three = %lu\n", sizeof  ↗
        (iArray_Three));
37
38     printf("Number rows in 3-D integer array iArray_Three = %lu\n", (sizeof  ↗
        (iArray_Three) / sizeof(iArray_Three[0])));
39     num_rows_3D = (sizeof(iArray_Three) / sizeof(iArray_Three[0]));
40
41     printf("Number of elements (columns) in one row in 3-D integer array  ↗
        iArray_Three = %lu\n", (sizeof(iArray_Three[0]) / sizeof(iArray_Three[0]  ↗
        [0])));
42     num_columns_3D = (sizeof(iArray_Three[0]) / sizeof(iArray_Three[0][0]));
43
44     printf("Number of elements (depth) in one column in one row in 3-D integer  ↗
```

```
    array iArray_Three = %lu\n", (sizeof(iArray_Three[0][0]) / sizeof
    (iArray_Three[0][0][0]));
45    depth_3D = (sizeof(iArray_Three[0][0]) / sizeof(iArray_Three[0][0][0]));
46
47    printf("Number of elements in total in 3-D Array iArray_Three = %d\n",
    (num_rows_3D * num_columns_3D * depth_3D));
48
49    printf("\n\n");
50
51    return(0);
52 }
53
54
55
```