

```
1  #include <stdio.h>
2  int main(void)
3  {
4      //variable declaraions
5
6      //IN-LINE INITIALIZATION
7      int iArray[5][3][2] = { { { 9, 18 }, { 27, 36 }, { 45, 54 } },
8                              { { 8, 16 }, { 24, 32 }, { 40, 48 } },
9                              { { 7, 14 }, { 21, 28 }, { 35, 42 } },
10                             { { 6, 12 }, { 18, 24 }, { 30, 36 } },
11                             { { 5, 10 }, { 15, 20 }, { 25, 30 } } };
12
13     int int_size;
14     int iArray_size;
15     int iArray_num_elements, iArray_width, iArray_height, iArray_depth;
16     int i, j, k;
17
18     //code
19     printf("\n\n");
20
21     int_size = sizeof(int);
22
23     iArray_size = sizeof(iArray);
24     printf("Size Of Three Dimensional ( 3D ) Integer Array Is = %d\n\n",
25           iArray_size);
26
27     iArray_width = iArray_size / sizeof(iArray[0]);
28     printf("Number of Rows (Width) In Three Dimensional ( 3D ) Integer Array Is =
29           %d\n\n", iArray_width);
30
31     iArray_height = sizeof(iArray[0]) / sizeof(iArray[0][0]);
32     printf("Number of Columns (Height) In Three Dimensional ( 3D ) Integer Array
33           Is = %d\n\n", iArray_height);
34
35     iArray_depth = sizeof(iArray[0][0]) / int_size;
36     printf("Depth In Three Dimensional ( 3D ) Integer Array Is = %d\n\n",
37           iArray_depth);
38
39     iArray_num_elements = iArray_width * iArray_height * iArray_depth;
40     printf("Number of Elements In Three Dimensional ( 3D ) Integer Array Is = %d\n
41           \n", iArray_num_elements);
42
43     printf("\n\n");
44     printf("Elements In Integer 3D Array : \n\n");
45
46     for (i = 0; i < iArray_width; i++)
47     {
48         printf("***** ROW %d *****\n", (i + 1));
49         for (j = 0; j < iArray_height; j++)
50         {
51             printf("***** COLUMN %d *****\n", (j + 1));
52             for (k = 0; k < iArray_depth; k++)
53             {
```

```
48         printf("iArray[%d][%d][%d] = %d\n", i, j, k, iArray[i][j][k]);
49     }
50     printf("\n");
51 }
52 printf("\n\n");
53 }
54
55 return(0);
56 }
57
58
```