# Chapter Review Questions

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Chapter 6 Review Questions (10 points):

1. What is naming an array, stating the element type, and specifying the number of dimensions in the array called?

**It is called declaring an array.**

1. With a two-dimensional array, the first index identifies the \_\_\_\_\_\_ of an element and the second index identifies the \_\_\_\_\_\_ of an element.

**The first index identifies the row of an element and the second identifies the column.**

1. An m-by-n array contains \_\_\_\_\_ rows, \_\_\_\_\_ columns and a total of \_\_\_\_\_ elements.

**It contains m rows and n columns. It contains a total of m \* n elements.**

1. Consider a three-by-five float array named my\_float; write the Java statement(s) to declare and create the array my\_float.

**float[][] my\_float;**

**my\_float = new float[3][5];**

1. Consider a three-by-five float array named my\_float; write the Java statement(s) to initialize all of the elements to 0.0

**for(int i = 0; i < 3; i++){**

**for(int j = 0; j < 5; j++){**

**my\_float[i][j] = 0.0f;**

**}**

**}**

1. Consider a three-by-five float array named my\_float; write the Java statement(s) using for loop(s) to sum up the individual columns into an array named sum, with sum[0] holding the sum of elements in column 0, sum[1] holding the sum of elements in column 1, etc.

**float[] sum = new float[5];**

**for(int j = 0; j < 5; j++){**

**float colSum=0.0f;**

**for(int i = 0; i < 3; i++){**

**colSum += my\_float[j][i];**

**}**

**sum[j] = colSum;**

**}**

1. Consider a three-by-five float array named my\_float; write the Java statement(s) to output the elements in a matrix form (three rows with five columns).

**for(int i = 0; i < 3; i++){**

**for(int j = 0; j < 5; j++){**

**System.out.print(my\_float[i][j] + “ ”);**

**}**

**System.out.println();**

**}**

1. Consider a three-by-five float array named my\_float; write the Java statement(s) to prompt the user to enter values for each of the elements to be stored in the array.

**for(int i = 0; i < 3; i++){**

**for(int j = 0; j < 5; j++){**

**System.out.print(“Enter the Value for Row ”+ (i+1) + ” Column ” + (j+1) + “: “)**

**my\_float[i][j] = new java.util.Scanner(System.in).nextFloat();**

**}**

**}**

1. Consider a five-by-four integer array named my\_integers; write the Java statement(s) to fill the array elements with random integers between 0 and 50 (inclusively – including the value of 0 or 50).

**for(int i = 0; i < 5; i++){**

**for(int j = 0; j < 4; j++){**

**my\_integers[i][j] = new java.security.SecureRandom().nextInt(51);**

**}**

**}**

1. Consider a five-by-four integer array named my\_integers; write the Java statement(s) to determine the row and column of the largest value stored in the array.

**int max = my\_integers[0][0];**

**int row = 0,**

**col = 0;**

**for(int i=0;i<5;i++){**

**for(int j=0;j<4;j++){**

**if(my\_integers[i][j] > max)**

**max = my\_integers[i][j];**

**row = i;**

**col = j;**

**}**

**}**