**1) What does an array look like in memory?**

-An array is an unordered sequence of items that live in a contiguous block of memory and are accessed by calling an index.

**2) Where is memory allocated to hold an array, on the stack or on the heap?**

-The memory allocated to hold an array is stored in the heap.

**3) Where is memory allocated to hold an array reference, on the stack or on the heap?**

-The memory allocated to hold an array reference is stored in the stack.

**4) Can an array hold values of different types? This is a trick question, the answer is, “It depends.” Explain.**

-Arrays are homogeneous in nature, so it cannot hold multiple data types. However, by declaring an array as an object[], it can be used to store different data types. Object-types are the base class of all data types, so if an array is declared as an object-type then all types of data can be stored in the array.

**5) Describe the syntax of the condition for a foreach loop.**

-The syntax of the condition for a *foreach* statement declares an iteration variable that automatically acquires the value of each element in the array. The type of this variable must match the type of the elements in the array.

**6) How do you make a deep copy of an array?**

-To make a deep copy of an array, you must use the appropriate code in a *for* loop statement.

**7) What is the difference between a multi-dimensional array and an array of arrays?**

-The difference between a multi-dimensional array and an array of arrays is that a multi-dimensional array is always an even shape and the number of elements is equal to the number of rows multiplied by the number of columns. An array of arrays (or *jagged array*) allows for columns or rows of varying length and does not always result in a symmetric shape.

**8) How do you flatten a multi-dimensional array?**

-You can flatten a multi-dimensional array by using nested *for* loops.