**Homework Unit 7 – Arrays Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

For problems 1–6 fill in the blanks for each:

1. A lists of values can be stored in a(n) \_\_\_\_\_\_\_\_\_.
2. The elements of an array are related by the fact that they have the same \_\_\_\_\_\_\_\_\_\_\_.
3. The number used to refer to a particular element of an array is called its\_\_\_\_\_\_\_\_\_\_.
4. The indices of an array start at index \_\_\_\_\_\_\_\_\_\_.
5. Arrays are included in a group of objects that contain data known as

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. To traverse every element of an array, the most common practice would be to use a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

For problems 7-11 state whether the statement is **true** or **false**. If **false** explain.

1. An array can store many different types of values. \_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. An array that has 5 elements can easily be changed to hold 10 elements \_\_\_\_\_\_\_\_\_\_\_

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1. To refer to a particular location or element within an array, we specify the name of the

array and the value of the particular element. \_\_\_\_\_\_\_\_\_\_\_

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1. To indicate that 100 locations should be reserved for integer array p, we must write

int p[100]; \_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. A sketch that initializes the elements of a 15-element array to zero *must* contain a

for() statement. \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

For problems 12-16 write a single statement that performs each.

1. Create a constant SIZE and set its value to 10.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Define the array fractions with size 35 and elements of type float and initialize the elements to 0.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Assign the value 1.667 to fractions array element nine.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Retrieve the 9th element and set fractions array element 10 to array element 9 plus 1.
2. Assign the value 3. 333 to the seventh element of the array fractions.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Write a part of a short sketch that will print all the elements of the array fractions to the serial monitor in a column format. Use a **for()** loop for your repetition structure.

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For problems 18-21, find the **errors** in each program segments and then correct the error.

1. #define SIZE 100; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SIZE = 10; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. #define MYVALUE = 300 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Assume: int b[10] = {0};

for(int i = 0; i <= 10; i++) b[i] = 1;

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Write a short sketch, include setup() and loop(),that will create an array to save only the even valued integers from 2 through 22. Use a for loop to assign those values to the array positions 0 through 10. Print the values from that array to the serial monitor all on one line with a space between each integer.

Now write a second short sketch to take in 10 integers as input from the serial monitor and then print the values out, one line per value.

**Teacher Signature:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_