## 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 _____.
6. 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.

7. An array can store many different types of values. _____

   _____

8. An array that has 5 elements can easily be changed to hold 10 elements _____

   _____

9. 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. _____

   _____

10. To indicate that `100` locations should be reserved for integer array `p`, we must write `int p[100];` _____

    _____

11. 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.

12. Create a constant `SIZE` and set its value to `10`.

    _____

13. Define the array `fractions` with size 35 and elements of type float and initialize the elements to 0._____

14. Assign the value 1.667 to `fractions` array element nine.

    _____

15. Retrieve the 9th element and set `fractions` array element 10 to array element 9 plus 1.

16. Assign the value 3. 333 to the seventh element of the array `fractions`.

    _____

17. 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.

    _____

    _____

    _____

    _____

    _____

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

18. `#define SIZE 100;` _____

`SIZE = 10;` _____

19. `#define MYVALUE = 300` _____

20. Assume:

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

_____

21. 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:** _____