Name:_____

1. What are the 3 things you need in every loop?

2. Given the following code, what is a better and more efficient way to populate this list? Write out the exact code you would type into APPlap.

```
1  var myArray = [];
2  appendItem(myArray, randomNumber(1,10));
3  appendItem(myArray, randomNumber(1,10));
4  appendItem(myArray, randomNumber(1,10));
5  appendItem(myArray, randomNumber(1,10));
6  appendItem(myArray, randomNumber(1,10));
7  appendItem(myArray, randomNumber(1,10));
8  appendItem(myArray, randomNumber(1,10));
```


3. Given the following code, if myArray[] has 20 elements, then when does this loop stop?

```
14 ▾ for (var i = 0; i < myArray.length; i++) {
15       //Your code goes here
16       myArray[i]=myArray[i]+50;
17     }
```


4. What does it mean to iterate over every index in the array?

5. Given the following code, if randomArray[] has been populated to include:

[1, 4, 6, 9, 10 , 1, 4, 6, 8, 10, 9, 2, 7, 3, 4] then what is the output?

```
1   var randomArray = [];
2 ▾ for (var i = 0; i < 15; i++) {
3       appendItem(randomArray, randomNumber(0,10));
4   }
5   console.log("Original: " + randomArray);
6 ▾ for (var i = 0; i < randomArray.length; i++) {
7 ▾    if (randomArray[i]==5){
8         console.log("true");
9       }
10 ▾    else{
11        console.log("false");
12      }
13  }
```

6. Given the following code, if testArray[] has been populated to include: [0,3,0,4,2,1,10,8,7,4],

then what is the output?

```
1   var fiveCount = 0;
2   var testArray = [];
3 ▾ for (var i = 0; i < 10; i++) {
4       appendItem(testArray, randomNumber(0,10));
5   }
6   console.log("Original: " + testArray);
7 ▾ for (var i = 0; i < testArray.length; i++) {
8 ▾    if (testArray[i]==5){
9         fiveCount++;
10      }
11  }
12 ▾ if (fiveCount > 0){
13      console.log("true");
14  }
15 ▾ else{
16      console.log("false");
17  }
18  console.log("Number of Fives: " + fiveCount);
19  
```