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1. What is printed when you run this code?

```
int[] nums = {3,4,7,6,9,2,11};
for(int i = nums.length-1; i>-1; i--)
{
   if(nums[i]%2==0)
      System.out.print(nums[i]+1);
}
```

3 7 5

2. What are the contents of this array when this code has run?

```
int[] nums = {3,4,7,6};
for(int i = 0; i<nums.length; i++)
{
   nums[i]=nums[i]+nums[i]%2;
}
```

{4, 4, 8, 6}

Problems 3 through 5 all use the Frog class and are all go together.

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3. Given the Frog class to the right, write code that creates a Frog array named pond to hold 500 Frog objects and then instantiates each element.

```
Frog[] pond = new Frog[500];
for(int i=0; i<pond.length; i++)
   pond[i] = new Frog();
```

```
class Frog
{
   private int location;
   public Frog() {location=0; }
   public void hop(int n) {location+=n; }
   public int getLocation() {return location;}
   public String toString() {String temp = "";
      for(int i = 0;i<location;i++){ temp+=".";}
      return temp+"@";
   }
}
```

---

4. Write code to hop each Frog in the array pond a random value from 10 to 50 inclusive.

```
for(int i=0; i<pond.length ;i++)
   pond[i].hop((int)(Math.random()*41)+10);
```

---

5. Write code to report the average location of all of the Frog objects in the pond array. (You will use the .getLocation() method which returns an int value of a specific Frog object's location.) Print the average as a double.

```
int total = 0;
for(Frog f: pond)
   total += f.getLocation();
System.out.println("Average: -" + (1.0*total/pond.length));
```

---

6. Write code which changes all elements of String array arr to be upper case.

```
String[] arr = //initialized with valid data;
for(int i=0; i<arr.length; i++)
   arr[i] = arr[i].toUpperCase();
```

7. Write a method dupPresent that accepts a String array named **names** and returns true if one or more duplicates are present, false if no duplicates are present.

```
public static boolean dupPresent (String [] names)
{
    for(int i = 0; i < name.length; i++)
    {
        for(int j = i+1; j < names.length; j++)
        {
            if (names[i].equals(names[j])) return true;
        }
    }
    return false;
}
```

8. Write a regular for loop to print all the elements of an int array **nums** on a single line:	9. Write an enhanced for loop to add all the elements of an int array **nums** in the variable **total**.
`int[] nums = //initialized with valid data;` ```for(int i=0; i<nums.length; i++)` ` System.out.print(nums[i] + "_");` `System.out.println();```	`int[] nums = //initialized with valid data;` `int total - 0;` ```for(int n: nums)` ` total += n;```

10. Write code that prints all elements of the String array words which end in "ly".

```
String[] words = //initialized with valid data;

for(String t: words)
{
    if (t.substring(t.length()-2).equals("ly"))
        System.out.println(t);
}
```