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| <p>1. What is output by the following:</p> <pre>String a = "sticks"; System.out.println(a.indexOf("h"));</pre> <p style="text-align: center;">-1</p> | <p>2. What is output by the following:</p> <pre>String a = "sticks"; System.out.println(a.substring(3));</pre> <p style="text-align: center;">cks</p> |
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3. The Assignment class performs as indicated in the following table.

Command	Output
Assignment a = new Assignment("Math");	<no output>
System.out.println(a);	1. Math
Assignment b = new Assignment("APCS");	<no output>
System.out.println(b);	2. APCS
b.done();	<no output>
System.out.println(b);	2. APCS (completed)

Write the complete Assignment class here:

```
class Assignment {
    private String name;
    private boolean completed;
    private static int nextNum = 1;
    private int num;

    public Assignment(String n) {
        name = n; completed = false;
        num = nextNum;
        nextNum++;
    }

    public void done() {
        completed = true;
    }

    public String toString() {
        String temp = "";
        if (completed)
            temp = "(completed)";
        return num + ". - " +
            name + temp;
    }
}
```

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| <p>4. What is output when this code runs?</p> <pre>int h=10; h--; h/=3; h+=h; System.out.println(h);</pre> <p style="text-align: center;">6</p> | <p>5. Write a line which prints num to the p power, assuming both num and p are integers and are properly initialized:</p> <pre>System.out.println(Math.pow(num,p));</pre> |
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6. Assume String array **words** is properly initialized with valid Strings. Write code to check the contents of String array **words** and count and print the number of entries where the first letter is the same as the last letter:

```
int c = 0;
for (String w: words)
    if (w.substring(0,1).equals(w.substring(w.length()-1)))
        c++;
System.out.println(c);
```

7. Referring as necessary to the Frog class to the right, write code below that does the following:

Create a 1000 element Frog array.

Instantiate each Frog.

Hop each Frog its index value. So the Frog at location 0 gets hopped zero (sadly, it does not really get to hop) and the Frog at index 999 hops 999 spaces.)

```
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+"@";
        }
}
```

```
Frog[] pond = new Frog[1000];
for (int i = 0; i < pond.length; i++)
    pond[i] = new Frog();
    pond[i].hop(i);
```

8. Simplify this boolean expression:

$!(x < y \parallel (x \leq 7 \ \&\& \ y \neq 6))$
 $x > y \ \&\& \ (x > 7 \parallel y = 6)$

9. Write code to declare a String array that contains your first and last name as separate Strings using an array initializer.

```
String str = { "Mr.", "Hops" };
```

10. Problem 10 refers to the code to the right.

mrHops is an instance of the class Frog.

```
Frog mrHops = new Frog();
```

circle one: True or False