For this assignment you are expected and encouraged to make use of the line-at-a-time Javascript interpreter:
http://rona.cs.usna.edu/~si110/resources/interpreter.html the line-at-a-time Javascript interpreter
http://rona.cs.usna.edu/~si110/resources/batchInterpreter.html the batch Javascript interpreter

1. What Javascript statement produces the following alert box? Note: You must use the line-at-a-time interpreter (URL above) to experiment and make sure your solution works!

2. Consider the following sequence of interpreter commands:

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/8/6/0</td>
<td>var t = 0;</td>
</tr>
<tr>
<td></td>
<td>var a = 3;</td>
</tr>
<tr>
<td></td>
<td>t = t + a;</td>
</tr>
<tr>
<td></td>
<td>t = t + a*a;</td>
</tr>
</tbody>
</table>

What is the value of t at this point?

3. These are string questions. You should try these expressions out in the interpreter!

   a. The value of "look"+5*7+"out" is ______________________ 6/2/2/0
   b. The value of "look\"+5*7+\"out" is ______________________ 6/2/2/0
   c. Why did the \ characters in b cause the output differences you observed in b vs. a

4. The following sequence of statements is meant to end with x being the square of the number entered by the user. It doesn’t work.
   Note: Try entering these two statements (in order) into the interpreter (link above)! 10/8/5/0

   var x = prompt("enter a number");
   x*x = x;

   To fix this we must replace x*x = x with x = x*x. Every 2nd grader knows that 3×3 = 9 means the same thing as 9 = 3×3. So why does it matter whether we write x = x*x or x*x = x?
5. Run both versions of the program below in the batch interpreter and explain which version is correct and why.

**Version 1**
```javascript
var a = prompt("enter age");
var y = 2012 + a;
alert("When you are twice your current age, the year will be " + y);
```

**Version 2**
```javascript
var a = prompt("enter age");
var y = 2012 + Number(a);
alert("When you are twice your current age, the year will be " + y);
```

6. A store has a sale in which everything is 30% off. Specially marked items are an additional 15% off. The following program computes the discounted price for a specially marked item that was originally $97. Show how to modify the program so that the user enters the initial price (as shown). Test in the batch interpreter! (URL above).

```javascript
var c1 = 97*(1 - .30);
var c2 = c1*(1 - .15);
alert("discount price is " + c2);
```

Check one: □ I didn't try in interpreter
□ I tried in the interpreter and it didn't work right
□ I tried in the interpreter and it worked right

7. Fill in the following:
   a. What is the value of `typeof("true")` ? ____________________
   b. What is the value of `typeof(true)` ? ____________________
   c. What is the value of `typeof('12.5')` ? ____________________
   d. What is the value of `typeof(12.5)` ? ____________________

8. Recall that `prompt()` returns a String with whatever the user entered into the box.

   **Fill in assuming user enters 12.**
   ```javascript
   var x = 0;
   var y = "";
   var i = prompt("Enter num");
   var x = x + i;
   var y = y + i;
   ```

   **Fill in assuming user enters hot.**
   ```javascript
   var x = 0;
   var y = "";
   var i = prompt("Enter num");
   var x = x + i;
   var y = y + i;
   ```