

Name_____

DV311 Midterm

August 11th 2011

For this test you can assume there is a `printLine()` function. The `printLine` function takes a variable number of arguments separates them with spaces and displays them on the page followed by a newline character (Just like the one from the homework).

There are a total of 115 possible points on the test. Your grade will be out of 100 however, so there is possibility of earning up to 15 bonus points.

I recommend getting the ones you know first and coming back for the rest.

Name 4 primitive data types and give an example of each. (5 points)

What are reserved words? Why would you need to know about them? Give a few examples of reserved words. (5 points)

Circle the valid variable identifiers (5 points)

<code>_name</code>	<code>last-name</code>	<code>\$</code>	<code>2nd_year</code>	<code>school</code>
<code>class</code>	<code>redKangaroo</code>	<code>MAX_VALUE</code>		

Is this true or false? (5 points)

`((4 >= 6) || ("grass" != "green")) && !(((3 * 3) === 9) && true)`

What is the meaning of the word “concatenate”? How do you perform concatenation in code?

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(2 points)

Given this html write the code to add the values of #num1 and #num2 and place the result in #result. The solution should place 2.8 in #result. (20 points)

```
<input type="text" id="num1" value="1.5" />  
<input type="text" id="num2" value="1.3" />  
<input type="text" id="result" value="" />
```

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How do you test if a value is NaN? (2 points)

Write a program that simulates rolling a dice. It should print 1,2,3,4,5, or 6. (5 points)

Can you describe the relationship between global variables and the window object?(2 points)

This program prints the numbers 1 through 10. There is subtle error though. Can you identify it. (3 points)

```
for(i = 1; i <= 10; i++){  
    printLine(i);  
}
```

Write a program that prints the variable s backwards. It should print on one line:(10 points)

```
var s = "mrow latem ym eta lwo rM";
```

What does the following code print?(3 points)

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```
var animal = "beagle";
switch(animal){
  case "cat":
    printLine("meowww");
    break;
  case "beagle":
    printLine("woof");
  case "dog":
    printLine("bark");
    break;
  default:
    printLine("...");
}
```

What code would you write to store your name in a variable? (1 point)

What code would you write to create a reusable function that multiplies two variables?(3 points)

How would you execute that function with the numbers 5 and 6 and printLine the result?
(2 points)

What is the purpose of jQuery's \$(document).ready() function? What type does ready() expect as its first argument? (3 points)

What does the following code draw? (5 points)
assume this html:

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```
<canvas id="canvas" width="500" height="300" />
```

```
var canvas = document.getElementById('canvas');  
var ctx = canvas.getContext('2d');  
// fillRect(x, y, width, height)  
ctx.fillRect(20,115,15, 70);  
ctx.fillRect(465,115,15, 70);  
ctx.beginPath();  
// arc(x, y, radius, startAngle, endAngle, anticlockwise)  
ctx.arc(250, 150, 5, 0, Math.PI*2, true);  
ctx.closePath();  
ctx.fill();
```

Assume this box is 300x500



Describe the purpose of the following operators and expressions in JavaScript? (5 points)

!

;

=

===

*

%

++

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[]

break

return

What does the following print? (6 points)

```
var s = "foo"
function a(){
  var s = "bar";
  function b(){
    printLine(s);
  }
  b();
}
a();
printLine(s);
```

What is considered falsey in JavaScript? What is truthy?(3 points)

Finish this code snippet to printLine the value of **pi** with only two decimal places. (5 points)

```
var pi = 3.14159;
```

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Write a program that prints a random tic-tac-toe board. Unlike a regular game of tic-tac-toe don't worry about the number of X's and O's being equal. A good solution could print results that look like this. (20 points)

XOX	XOO	OOO	OOO	XXX
OXX	XXX	XXX	OXX	XXX
XXO	XXX	XOO	OOO	XXX