Yellow Key Full Name:

Teacher/class time: Eloe(9AM) Hoot(11AM) Hoot(1PM) Eloe(1PM) Hoot(2PM)

You may use a single sheet (8.5 by 11 inches) of handwritten paper notes. No other resources are allowed.

(Question 1A - 6 points) Given the following Bootstrap 5 device screen sizes:

```
Extra small: <576px Small: >= 576px Medium: >= 768px Large: >= 992px Extra Large: >= 1200px
Given the following HTML:
```

```
<div class='row'>
    <div class='col-5'>Demo 1</div>
    <div class='col-7'>Demo 2</div>
</div>
<div class='row'>
    <div class='col-sm-4'>Content 1</div>
    <div class='col-sm-2'>Content 2</div>
    <div class='col-md-2'>Content 3</div>
    <div class='col-sm-2'>Content 4</div>
</div>
```

Show (using the cells below to help with spacing) where the content would go on a **small** device and outline the boxes to indicate how many columns each div will have in the row. Note: you may not need all rows provided, but you will not need more rows. The demo lines have been done for you

Demo 1	Demo	2	
Content 1	Content 2		
Content 3			
Content 4			

(Question 1B - 2 points) What is the result of `1'+1 (evaluated in Javascript)? What is the result of '1'-1? Why do these Javascript expressions behave differently?

```
'1'+1='11', '1'-1=0; there is no string
subtraction so it casts the string to an int,
but casts the int to a string for concat
```

(Question 1C - 2 points) What does it mean when we say a function is anonymous

A function is not bound to a name/has no name

The following is in the body of some responsive HTML annotated with line numbers that is using bootstrap. You will modify this code to accomplish the given tasks for question 2.

```
01:<form>
       <label for="form1 size">Size is: </label>
   02:
        <input type="number" id="form1 size" name="form1 size"> <br>
   03:
       <label for="form1 word">Word is: </label>
   04:
       <input type="text" id="form1 word" name="form1 word">
   05:
        <label for="form1 cost">Cost is: </label>
   06:
   07:
        <input type="number" id="form1 cost" name="form1 cost">
   08:</form>
   09: <div class="container-fluid">
       <h1 id="fred">Responsive Design</h1>
       Resize the browser window
   12:
       To see the effect
       <div class="row" id="bit">
   14: <div class="col-sm-2" id="one">ALF </div>
   15: <div class="col-sm-2" id="two">BOGO</div>
       <div class="col-sm-2" id="three">GPU</div>
   16:
   17: <div class="col-sm-2" id="four">DOD </div>
   18:</div>
   19: <button type="button" class="btn btn-success">Opt1</button>
   20: <button type="button" class="btn btn-warning">Opt2</button>
<script>
function sizing()
{
  let val = document.getElementById('form1 size').value
 alert(val)
 let v1 = document.getElementById('one').innerHTML
 let v2 = document.getElementById('two').innerHTML
 document.getElementById('one').innerHTML=v2
 document.getElementById('two').innerHTML=v1
</script>
```

Question 2 (10 points)

Task 1 (2 points): Modify the word input so that it has a default value of "buddy". Give the line number of the HTML you are changing and what you are changing the line to.

Line #: 5

Modified to: <input type='text'...value='buddy>

Task 2 (6 points): Create a Javascript function named sizing that will get the value of the size from the form and show an alert with its value. It should then swap the contents of the divs containing ALF and DOD. Write the Javascript and appropriate HTML tags below line 20 on the previous page.

Task 3 (2 points): Modify the HTML so pressing the Opt2 button will call the function you wrote in task 2. Give the line number of the HTML you are changing and what you are changing the line to.

Line #: 20

Modified to: <button... onclick=sizing()>0pt2</button>

Question 3A (6 points) Write a Javascript function (no HTML needed) that takes an array of numbers, creates an Object that contains the average of the numbers and the smallest number in the array (choose appropriate keys to use for these values), and returns the object.

```
function (vals) { // no name needed, but can provide one
  let avg = 0
  let minval = vals[0]
  for val of vals {
    avg += val
    if (val < minval) minval = val;
    }
  return {'avg': avg, 'min': minval}
}</pre>
```

```
Question 3B (4 points) Given the following Javascript
function foo (somenumbers) {
   bar = 0
   for (num of somenumbers) {
      if (num % 2 == 0) bar -= num
       else bar += num
   }
   setTimeout(()=>alert(`Result is ${bar}`), 3000)
}
```

What happens when **foo([1,2,3,4,5,6])** is called? Specifically what is the output and when/how is it displayed to the user?

-3 is displayed in the alert text after 3 seconds

Midterm 2

You are allowed to use your single page of hand written notes as a reference.

1	2 p	oints			
	Which of the following is not a feature of Java Script?				
	0	Variables are untyped			
	X	Many primitive types			
	0	Light weight			
	0	Code is interpreted			
2					
		ile users are usually most comfortable scrolling content			
	0	using a double tap			
	X	vertically			
	0	using a pinch			
	0	horizontally			
3	2 p	oints			
		Bootstrap allows us to style buttons.			
	X	True			
	0	False			
4	0	into Energ Ougation			
4		oints Free Question ch of the following is NOT a way that Java Script can be added to HTML			
	VVIII				
		Internal script			
	O	URL			
	X	Inline string			
	0	External js file			

An exception is thrown