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:

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) Describe a difference between a variable declared with let and a variable declared with const.

```
The value (ref) of a variable declared with let may change
The value (ref) of a variable declared with const may not
```

(Question 1C – 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 stringsubtraction so it casts the string to an int, but casts the int to a string for concat

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>
02: <label for="form1 size">Size is: </label>
    <input type="number" id="form1 size" name="form1 size"> <br>
04: <label for="form1 word">Word is: </label>
05: <input type="text" id="form1 word" name="form1 word">
    <label for="form1 cost">Cost is: </label>
06:
    <input type="number" id="form1 cost" name="form1 cost">
08:</form>
09: <div class="container-fluid">
10: <h1 id="fred">Responsive Design</h1>
11: cp id="wilma">Resize the browser window
12: To see the effect
13: <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 colorMe()
  document.getElementById('one').style.background='orange'
  document.getElementById('one').className='col-sm-4'
  // other ways to set class name
  document.getElementById('fred').innerHTML='orange is the new black'
</script>
```

Question 2 (10 points)

Task 1 (2 points): Modify the cost input so that it has a default value of 12.34. Give the line number of the HTML you are changing and what you are changing the line to.

Line #: 7

Modified to: <input type'number... value=12.34>

Full Name: _

Task 2 (6 points): Create a Javascript function named colorMe that will make the div containing ALF use 4 columns and change its background color to orange. It should then change the contents of the h1 element to "orange is the new black". Write the Javascript and appropriate HTML tags below line 20 on the previous page.

Task 3 (2 points): Modify the HTML so pressing the Opt1 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 #: 19

Modified to: <button ... onclick='colorMe()'>Opt1</button>

Question 3A (6 points) Write a Javascript function (no HTML needed) that takes an array of numbers, creates an Object that contains the sum of the squares 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 sumsquares = 0
  let minval = vals[0]
  for val of vals {
    sumsquares += val*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 -= 1
       else bar += num
   }
   setTimeout(()=>alert(`Result is ${bar}`), 4000)
}
```

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?

The value 6 is displayed in the alert text 4 seconds after thefunction is called

Midterm 2

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

1	2 po	ints
	Varia	bles starting with the character signify a private variable.
	\bigcirc	Underscore
	0	dollar sign
	0	hash
	0	Colon
2	2 po	ints
	Whic	h tag is used to hold JavaScript code?
	0	<javascript></javascript>
	0	<js></js>
	0	<code></code>
	X	<script></th></tr><tr><th></th><th></th><th></th></tr><tr><th>3</th><th>2 po</th><th>ints</th></tr><tr><th></th><th>Which</th><th>of the following is not a Bootstrap class that can be used with a button?</th></tr><tr><th></th><th>0</th><th>btn-danger</th></tr><tr><th></th><th>0</th><th>btn-warning</th></tr><tr><th></th><th>X</th><th>btn-java-script</th></tr><tr><th></th><th>0</th><th>btn-success</th></tr></tbody></table></script>

4	2 pc	pints
	Whic	h of the following is not a feature of Java Script?
	0	Light weight
	X	Many primitive types
	0	Code is interpreted
	0	Variables are untyped
5	2 pc	
		oints Free Question
	The b	rints Free Question asic table styling can be done using which class?
	The b	Tree question
	The b	asic table styling can be done using which class?
	The b	asic table styling can be done using which class? table container
	The b	asic table styling can be done using which class? table container style table