



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>
03:  <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">
06:  <label for="form1_cost">Cost is: </label>
07:  <input type="number" id="form1_cost" name="form1_cost">
08:</form>
```

```
09:<div class="container-fluid">
10:  <h1 id="fred">Responsive Design</h1>
11:  <p id="wilma">Resize the browser window</p>
12:  <p id="betty">To see the effect</p>
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>
16:    <div class="col-sm-2" id="three">GPU</div>
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( )>Opt2</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}
}
```

**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 points

Which of the following is not a feature of Java Script?

- ☐ Variables are untyped
- ☒ Many primitive types
- ☐ Light weight
- ☐ Code is interpreted

2 2 points

Mobile users are usually most comfortable scrolling content

- ☐ using a double tap
- ☒ vertically
- ☐ using a pinch
- ☐ horizontally

3 2 points

Bootstrap allows us to style buttons.

- ☒ True
- ☐ False

4 2 points **Free Question**

Which of the following is NOT a way that Java Script can be added to HTML

- ☐ Internal script
- ☐ URL
- ☒ Inline string
- ☐ External js file

5

2 points

Given the definition

**let array = [10, 20]**

What is the result if we ask for the value in position 3

- ☐ We get the value 10
- ☐ We get the number 0
- ☒ We get the value undefined
- ☐ An exception is thrown