You may use a single sheet (8.5 by 11 inches) of personally 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-md-3'>Content 1</div>
    <div class='col-sm-3'>Content 2</div>
    <div class='col-md-4'>Content 3</div>
    <div class='col-md-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	

-3

(Question 1B – 2 points) What problems do cookies help fix? What kinds of problems can cookies cause?

Cookie hold some state information, a cookie is returned from a server as part of a request, cookie holds property value pairs. Cookie can be used to track your activity on the web, cookie may not be encrypted and should be considered insecure.

(Question 1C – 2 points) Describe a difference between a variable declared with var and a variable declared with let.

Var is a original and just a var with non-lexical scoping. var can be used outside the block

let is a limited scope variable, let has a standard lexical block sc

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_init">Initial is: </label>
03:    <input type="number" id="form1_init" name="form1_init"> <br>
04:    <label for="form1_max">Max is: </label>
05:    <input type="number" id="form1_max" name="form1_max">
06:    <label for="form1_desc">Description is: </label>
07:    <input type="text" id="form1_desc" name="form1_desc">
08:</form>

09:<div class="container-fluid">
10:    <h1 id="toto">A small dog</h1>
11:    <p id="water">Melts a witch</p>
12:    <p id="tinman">Wants a heart</p>
13:    <div class="row" id="nav">
14:    <div class="col-sm-3" id="ml">MEAT LOAF</div>
15:    <div class="col-sm-3" id="br">BREAD</div>
16:    <div class="col-sm-3" id="pf">PINK FLOYD</div>
17:    <div class="col-sm-3" id="ch">CHICAGO</div>
18:</div>
19:<button type="button" class="btn btn-success">First</button>
20:<button type="button" class="btn btn-warning">Second</button>
```

function reinser (int number)
{
    document. getslement ById ("number"));
}
    int.number [number]
    int.number .concat()[number + water];
    int .replace().ml

Question 2 (10 points)

Task 1 (2 points): Modify the max input so that it has a default value of 100. Give the line number of the HTML you are changing and what you are changing the line to.

Line #:   05

Modified to:

`<input type= "number" id = "form1 _max" a name=" form1 man" value>100`

Task 2 (6 points): Create a Javascript function named `ranger` that will get the values of max and init in the form, compute the difference and concatenate it with the contents of the first paragraph, and then replace the contents of the div containing MEAT   LOAF with the result. Write the Javascript and appropriate HTML tags below line 20 on the previous page.

Task 3 (2 points): Modify the HTML so pressing the First 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 #: 10

Modified to:

```
< button type = "button" onclick = "document.getElementbyId ('ranger')
      inner HTML = ranger();
```

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 negative values and the count of the positive numbers in the array (choose appropriate keys to use for these values), and returns the object.

```
<div id = onlypositive >
 led numbers = {-1, 2, 3,-4,-5}
   <script>
   number = function sum() {
       for (i= if (number > 0)
           {
            num = +num;
           }
       else
       return 0,
document.set element By Id ("onlypositive").innerHTML ="count positive total";
   </script >
```

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

when remainder is _1_

```
new_values = values. map (function callback (norm, index [0],
                 values) {
          }
      [ , this fraction] )
   console. log ("fractions");
          }
```

3c) let pick = a;
    let pick = b;
    function pick (a,b) {
        if (a = even) b=even ; }

        return { b}
        else {
            return { eight }
            }

Midterm 2

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

1 2 points

Mobile users are usually most comfortable scrolling content

- ○ using a pinch
- ○ horizontally
- ⊘ vertically
- ○ using a double tap

2 2 points

In JavaScript, we can access the element with id "target" using which of the following?

- ○ element = dom.getElementById("target")
- ○ element = dom.element("target")

- ○ element = document.element("target")
- ⊘ element = document.getElementById("target")

3 2 points

The basic table styling in Bootstrap can be done using which class?

- ○ table container
- ⊘ table
- ○ style table
- ○ tbl

4 2 points

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

- ◯ Code is interpreted
- ◯ Light weight
- ⊘ Many primitive types
- ◯ Variables are untyped

5 2 points

Variables starting with the character _____ signify a private variable.

- ⊘ Underscore
- ◯ hash
- ◯ Colon
- ◯ dollar sign