

```
1 var lvl = 1
2 var typeMath = 0
3 var num1
4 var num2
5 var num3
6 var string
7 var correctnum = 0
8 var incorrectnum = 0
9 var displayed = false
10 var guessesnum = 0
11 var gate = false
12 var gate2 = false
13 var numsub = 0
14 var numadd = 0
15 var numXadd = 0
16 var numXsub = 0
17 var numXmult = 0
18 var numMult = 0
19 var multlvl = 0
20 var rnum = 0
21 var opperation1 = ""
22 var opperation2 = ""
23 var mixedNum
24 var Name1
25
26 var masterAdd = false
27 var masterSub = false
28 var masterMult = false
29
30 function showDifficulty(){
31     document.getElementById("mult").disabled = "true"
32     document.getElementById("mix").disabled = "true"
33     document.getElementById("Start").style.display =
        "none"
34     document.getElementById("Multiplayer").style.
        display = "none"
35     document.getElementById("br1").style.display = "
        none"
36     document.getElementById("sub").style.display = "
        inline-block"
37     document.getElementById("add").style.display = "
```

```
37 inline-block"
38     document.getElementById("mult").style.display = "
    inline-block"
39     document.getElementById("mix").style.display = "
    inline-block"
40     if (numadd > 4 && numsub > 4){
41         document.getElementById("mult").disabled = !
    document.getElementById("mult").disabled
42         lvl = 2
43     }
44     if (numsub > 9 && numadd > 9){
45         lvl = 3
46         document.getElementById("mix").disabled = !
    document.getElementById("mix").disabled
47     }
48 }
49 function AddOrSub(type){
50     typeMath = type
51     document.getElementById("add").style.display = "
    none"
52     document.getElementById("sub").style.display = "
    none"
53     document.getElementById("mix").style.display = "
    none"
54     document.getElementById("mult").style.display = "
    none"
55     document.getElementById("mathQ").style.display =
    "block"
56     document.getElementById("txtBx").style.display =
    "block"
57     document.getElementById("back").style.display = "
    block"
58     document.getElementById("txtBx").focus()
59     createQuestion()
60 }
61 function createQuestion(){
62     if (lvl === 1 && typeMath !== "X+-" && (typeMath
    !== "X" || multlvl == 2)){
63         num1 = Math.floor((Math.random()*10)+1)
64         num2 = Math.floor((Math.random()*10)+1)
65         string = num1 + " " + typeMath + " " + num2
```

```

66     }else if (lvl === 2 && typeMath !== "X+-" && (
        typeMath !== "X" || multlvl === 3)){
67         num1 = Math.floor((Math.random()*10)+10)
68         num2 = Math.floor((Math.random()*10)+10)
69         string = num1 + " " + typeMath + " " + num2
70     }else if (lvl === 3 && typeMath !== "X+-" &&
        typeMath !== "X"){
71         num1 = Math.floor((Math.random()*10)+20)
72         num2 = Math.floor((Math.random()*10)+20)
73         string = num1 + " " + typeMath + " " + num2
74     }else if (typeMath === "X"){
75         num1 = Math.floor((Math.random()*5)+1)
76         num2 = Math.floor((Math.random()*5)+1)
77         string = num1 + " " + typeMath + " " + num2
78     }else if (typeMath === "X+-"){
79         createQ(1)
80     }
81     else {
82         string = ""
83     }
84     document.getElementById("mathQ").innerHTML =
        string
85     displayed = true
86 }
87 function createQ(nums){
88     num1 = Math.floor((Math.random()*5)+1)
89     num2 = Math.floor((Math.random()*5)+1)
90     num3 = Math.floor((Math.random()*5)+1)
91     if (mixedNum > 4 && mixedNum < 10 && nums === 1){
92         num1 = num1 * 2
93         num2 = num2 * 2
94         num3 = num3 * 2
95     }
96     if (mixedNum > 9 && nums === 1){
97         num1 = num1 * 3
98         num2 = num2 * 3
99         num3 = num3 * 3
100    }
101    if (nums === 2){
102        num1 = Math.floor((Math.random()*10)+1)
103        num2 = Math.floor((Math.random()*10)+1)

```

```
104     num3 = Math.floor((Math.random()*10)+1)
105 }
106 rnum = Math.floor((Math.random()*3)+1)
107 if (rnum == "3"){
108     operation1 = " X "
109 }else if (rnum == "2"){
110     operation1 = " + "
111 }else if (rnum == "1"){
112     operation1 = " - "
113 }
114 rnum = Math.floor((Math.random()*3+1))
115 if (rnum == "3"){
116     operation2 = " X "
117 }else if (rnum == "2"){
118     operation2 = " + "
119 }else if (rnum == "1"){
120     operation2 = " - "
121 }
122 string = num1 + operation1 + num2 + operation2
    + num3
123 }
124 function answer(){
125     guessesnum = guessesnum + 1
126     document.getElementById("guesses").innerHTML = "
    Guesses: " + guessesnum
127     const i = document.getElementById("txtBx").value
    ;
128     if (typeMath === "+" && i == num1 + num2){
129         correct()
130         numadd = numadd + 1
131     }else if (typeMath === "-" && i == num1 - num2){
132         correct()
133         numsub = numsub + 1
134     }else if (typeMath === "X" && i == num1 * num2){
135         correct()
136         numMult = numMult + 1
137     }else if (typeMath === "X+-"){
138         if (checkans() == i){
139             correct()
140             mixedNum = mixedNum + 1
141         }
```

```
142     }else {
143         incorrectnum = incorrectnum + 1
144         if (typeMath == "-"){
145             numXsub = numXsub + 1
146         }
147         if (typeMath == "+"){
148             numXadd = numXadd + 1
149         }
150         if (typeMath == "X"){
151             numXmult = numXmult + 1
152         }
153         document.getElementById("incorrect").
innerHTML = "Incorrect: " + incorrectnum
154     }
155     if (numadd > 4){
156         document.getElementById("+").src = "badges\\
Good+lvl1.png"
157     }
158     }else if (numsub > 4){
159         document.getElementById("-").src = "badges\\
lvl1-.png"
160     }else if (numMult > 4){
161         document.getElementById("x").src = "badges\\
lvl1x.png"
162     }
163     document.getElementById("addnum").innerHTML = "
Addition Questions Right: " + numadd
164     document.getElementById("subnum").innerHTML = "
Subtraction Questions Right: " + numsub
165
166     if (numadd > 9){
167         document.getElementById("+").src = "badges\\
lvl2+.png"
168     }
169     if (numsub > 9){
170         document.getElementById("-").src = "badges\\
lvl2-.png"
171     }
172     if (numMult > 9) {
173         document.getElementById("x").src = "badges\\
lvl2x.png"
```

```
174     }
175     if (numadd > 14){
176         document.getElementById("add").disabled = "
true"
177         document.getElementById("+").src = "badges\\
lvl3+.png"
178         if (numXadd < 1){
179             document.getElementById("+").src = "
badges\\lvl4+.png"
180         }
181
182     }
183     if (numsub > 14){
184         document.getElementById("sub").disabled = "
true"
185         document.getElementById("-").src = "badges\\
lvl3-.png"
186         if (numXsub < 1){
187             document.getElementById("-").src = "
badges\\lvl4-.png"
188         }
189     }
190     if (numMult > 14){
191         document.getElementById("mult").disabled = "
true"
192         document.getElementById("x").src = "badges\\
lvl3x.png"
193         if (numXmult < 1){
194             document.getElementById("x").src = "
badges\\lvl4x.png"
195         }
196     }
197     if (mixedNum > 4){
198         document.getElementById("x+-").src = "lvl1X
+-"
199         if (mixedNum > 9){
200             document.getElementById("x+-").src = "
lvl2X+-"
201         if (mixedNum > 14){
202             document.getElementById("x+-").src
= "lvl3X+-"
```

```
203     }
204     }
205     }
206     document.getElementById("txtBx").value = ""
207     if (numadd > 4 && numsub > 4){
208         document.getElementById("mult").disabled = !
document.getElementById("mult").disabled
209         lvl = 2
210     }
211     if (numsub > 9 && numadd > 9){
212         lvl = 3
213         document.getElementById("mix").disabled = !
document.getElementById("mix").disabled
214     }
215 }
216 function checkans(){
217     if (operation1 == " X "){
218         var x = num1 * num2
219         if (operation2 == " + "){
220             x = x + num3
221         }else if (operation2 == " X "){
222             x = x * num3
223         } else{
224             x = x - num3
225         }
226     }
227     if (operation1 == " + "){
228         var x = num1 + num2
229         if (operation2 == " + "){
230             x = x + num3
231         }else if (operation2 == " X "){
232             x = x * num3
233         } else {
234             x = x - num3
235         }
236     }
237     if (operation1 == " - "){
238         var x = num1 - num2
239         if (operation2 == " + "){
240             x = x + num3
241         }else if (operation2 == " X "){
```

```
242         x = x * num3
243     } else{
244         x = x - num3
245     }
246 }
247 return x
248 }
249 function correct(){
250     correctnum = correctnum + 1
251     document.getElementById("correct").innerHTML = "
    Correct: " + correctnum
252     createQuestion()
253 }
254 function reset() {
255     document.getElementById("Start").style.display
    = "block"
256     document.getElementById("reset").style.display
    = "none"
257     document.getElementById("mathQ").innerHTML = ""
258     document.getElementById("txtBx").value = ""
259 }
260 document.addEventListener("keypress", function (e){
261     if (e.key == "Enter" && displayed == true){
262         answer()
263     }
264 });
265 function back(){
266     document.getElementById("mathQ").style.display
    = "none"
267     document.getElementById("submit").style.display
    = "none"
268     document.getElementById("txtBx").style.display
    = "none"
269     showDifficulty();
270 }
271 // Page 2
272
273 var name1
274 var name2
275 var turn = true
276 var point1 = 0
```



```
277 var point2 = 0
278
279 function names(){
280     name1 = document.getElementById("int1").value
281     name2 = document.getElementById("int2").value
282     document.getElementById("name1").innerHTML =
        name1
283     document.getElementById("name2").innerHTML =
        name2
284     document.getElementById("welcome").style.display
        = "none"
285     document.getElementById("int2").style.display =
        "none"
286     document.getElementById("int1").style.display =
        "none"
287     document.getElementById("btn1").style.display =
        "none"
288     questions()
289 }
290 function questions(){
291     if (turn == true){
292         document.getElementById("name1").style.
            background = "red"
293         document.getElementById("name2").style.
            background = ""
294     }else{
295         document.getElementById("name2").style.
            background = "red"
296         document.getElementById("name1").style.
            background = ""
297     }
298     createQ(2)
299     document.getElementById("mathQ").innerHTML =
        string
300 }
301 function answerQ(){
302     if (checkans() == document.getElementById("txtBx
        ").value){
303         if (turn == true){
304             point1 = point1 + 1
305             turn = false
```

```
306         document.getElementById("pt1").innerHTML
      = "Points: " + point1
307     }else if (turn == false){
308         point2 = point2 + 1
309         turn = true
310         document.getElementById("pt2").innerHTML
      = "Points: " + point2
311     }
312 }
313 if (turn == true) {
314     turn = false
315 }else {
316     turn = true
317 }
318 questions()
319 }
```

```
1 .hidden{
2     display: none;
3
4 }
5 #correct{
6     color: green;
7     font-size: 100px;
8     font-family: "Comic Sans MS";
9     margin: 0px;
10 }
11 #Badges{
12     font-size: 100px;
13     color: green;
14     margin: 0px;
15 }
16 #imgs{
17     display: inline-block;
18     text-align: center;
19 }
20 #p{
21     text-align: center;
22 }
23 .btns{
24     font-size: 100px;
25     width: 49.89%;
26     height: 400px;
27 }
28 .info{
29     font-size: 40px;
30     text-align: center;
31 }
32 .addOrSub{
33     font-size: 85px;
34     width: 24.8%;
35     height: 400px;
36 }
37 #sub:hover{
38     background: red;
39 }
40 #add:hover{
41     background: greenyellow;
```

```
42 }
43 #mult:hover{
44     background: dodgerblue;
45 }
46 #mix:hover{
47     background: blueviolet;
48 }
49 #badges{
50     text-align: center;
51     font-size: 100px;
52 }
53 .submit{
54     margin: auto;
55     font-size: 60px;
56 }
57 #back{
58     float: bottom;
59 }
60 #mathQ{
61     text-align: center;
62 }
63 .p {
64     text-align: center;
65     font-size: 40px;
66 }
67 #int1{
68     width: 40%;
69     height: 100px;
70     font-size: 50px;
71     text-align: center;
72 }
73 #int2{
74     width: 40%;
75     height: 100px;
76     font-size: 50px;
77     text-align: center;
78 }
79 #btn1{
80     width: 18%;
81     height: 100px;
82 }
```

```
83 table{
84     text-align: center;
85     margin: auto;
86     font-size: 100px
87 }
88 #mathQ{
89     margin: auto;
90     text-align: center;
91     font-size: 100px;
92     color: blue;
93 }
94 #txtBx{
95     text-align: center;
96     margin: auto;
97     display: block;
98     font-size: 50px;
99 }
100 #submit{
101     margin: auto;
102     text-align: center;
103     display: block;
104     font-size: 50px;
105 }
106
```



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4     <script src="script.js"></script>
5     <link rel="stylesheet" href="style.css">
6     <meta charset="UTF-8">
7     <title>Random Math Game</title>
8 </head>
9 <body>
10     <p class="info" id="correct">Correct: 0</p>
11     <p class="info" id="incorrect">Incorrect: 0</p>
12     <p class="info" id="guesses">Guesses: 0</p>
13     <p class="info" id="subnum">Subtraction Questions
    Right: 0</p>
14     <p class="info" id="addnum">Addition Questions
    Right: 0</p>
15     <button type="button" class="btns" id="Start"
    onclick="showDifficulty()">Single Player</button>
16     <button type="button" class="btns" id="
    Multiplayer" onclick="location.href = 'multiplayer.
    html'">Multiplayer</button>
17     <br id="br1">
18     <button type="button" class="hidden addOrSub"
    onclick="AddOrSub('-')" id="sub">Subtraction</button>
19     <button type="button" class="hidden addOrSub"
    onclick="AddOrSub('+')" id="add">Addition</button>
20     <button type="button" class="hidden addOrSub"
    onclick="AddOrSub('X')" id="mult">Multiply</button>
21     <button type="button" class="hidden addOrSub"
    onclick="AddOrSub('X+-')" id="mix">Mixed</button>
22     <br id="br3">
23     <p id="mathQ" class="hidden submit"></p>
24     <br id="br4">
25     <input type="text" id="txtBx" class="hidden
    submit">
26     <button type="button" id="submit" class="hidden
    submit" onclick="answer()">Submit</button>
27     <button type="button" id="reset" class="hidden
    submit" onclick="reset()">Click Here To Play Again</
    button>
28     <br>
```

```
29     <button type="button" id="back" onclick="back()"
    class="hidden submit">Back To Modes</button>
30     <p id="badges">Badges:</p>
31     <img id="+" class="imgs" src="">
32     <img id="-" class="imgs" src="">
33     <img id="x" class="imgs" src="">
34     <img id="x+-" class="imgs" src="">
35 </body>
36 </html>
```



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4     <script src="script.js"></script>
5     <link rel="stylesheet" href="style.css">
6     <meta charset="UTF-8">
7     <title>Title</title>
8 </head>
9 <body>
10     <p class="p" id="welcome">Welcome To Multiplayer
    ! In Multiplayer, you will have mixed equation
    problems ranging from 1-10. Type two names and click
    start!</p>
11     <input type="text" id="int1">
12     <input type="text" id="int2">
13     <button type="button" id="btn1" onclick="names()"
    >Start</button>
14     <table>
15         <tr>
16             <th id="name1">Player 1</th>
17             <th id="name2">Player 2</th>
18         </tr>
19         <tr>
20             <td id="pt1">Points: 0</td>
21             <td id="pt2">Points: 0</td>
22         </tr>
23     </table>
24     <p id="mathQ"></p>
25     <br id="br4">
26     <input type="text" id="txtBx">
27     <br>
28     <button type="button" id="submit" onclick="
    answerQ()">Submit</button>
29 </body>
30 </html>
```