

## Question 29

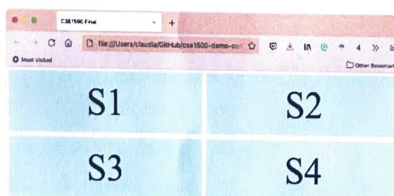
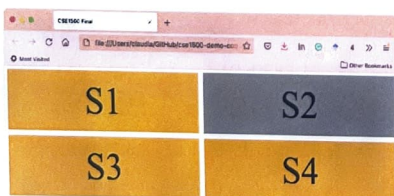
GENERAL Consider the following HTML:

```

1 <!DOCTYPE html>
2 <html lang="en">
3
4 <head>
5   <title>CSE1500 Final</title>
6   <style>
7     * {
8       margin: 0;
9     }
10
11     #main {
12       display: grid;
13       grid-template-columns: 1fr 1fr;
14       grid-template-rows: 1fr 1fr;
15     }
16
17     .square {
18       position: relative;
19       width: calc(50vw - 10px);
20       height: calc(50vh - 10px);
21       background-color: lightblue;
22       color: black;
23       border: 5px solid white;
24       font-size: 75px;
25       display: flex;
26       align-items: center;
27       justify-content: center;
28     }
29
30     .square + .square {
31       background-color: grey;
32     }
33
34     div > .square {
35       background-color: orange;
36     }
37
38     .square + .square + .square {
39       background-color: brown;
40     }
41   </style>
42 </head>
43
44 <body>
45   <div id="main">
46     <div class="square odd">S1</div>
47     <div class="square even">S2</div>
48     <div class="square odd">S3</div>
49     <div class="square even">S4</div>
50   </div>
51 </body>
52
53 </html>

```

How will its rendering look like?



Q29: Answer A.

Q29: Answer B.



Q29: Answer C.



Q29: Answer D.

**Question 30****GENERAL**

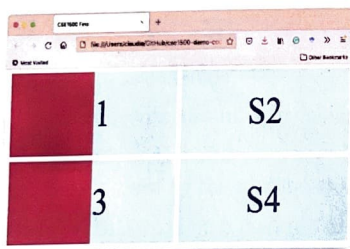
Consider the HTML of Question 29 once more. Replace lines 30-40 of the source with the following code snippet:

```

1 .square::after {
2   content: "";
3   position: absolute;
4   top: 0;
5   left: 0;
6   width: 50%;
7   height: 100%;
8   background-color: red;
9 }

```

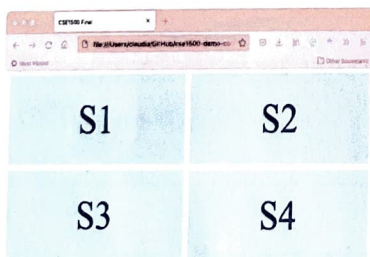
How will the rendering look like now?



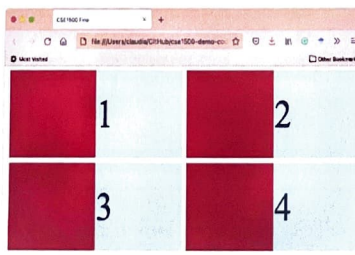
Q30: Answer A.



Q30: Answer B.



Q30: Answer C.



Q30: Answer D.

## Question 31

**GENERAL** Consider the HTML of Question 29 one last time. Which of the following selectors does **NOT** select the two `<div>` elements whose inner HTML is set to S1 and S3 respectively?

- ☒ A. `.square.odd { /* ... */ }`
- B. `div:nth-of-type(2n+1) { /* ... */ }`
- C. `div:nth-child(2n+1) { /* ... */ }`
- D. `.square .odd { /* ... */ }`

## Question 32

**WCQ** In WCQ, at the top left four decorative squares are visible: they are animated and change their color every half a second. Each square is a `<div>` element with class `square`. Their styling is defined by the following CSS snippet:

```

1 .square {
2   position: absolute;
3   width: 25px;
4   height: 25px;
5   top: 15px;
6   left: 50px;
7   background-color: tomato;
8   animation: colors 10s infinite;
9 }
10 @keyframes colors {
11   0% {
12     background-color: tomato;
13   }
14   5% {
15     background-color: deepskyblue;
16   }
17   10% {
18     background-color: gold;
19   }
20   /* .. more colors in 5% increments */
21   95% {
22     background-color: seagreen;
23   }
24 }
```

Based on this snippet, all four squares change their background color at the same time. Which CSS property do we need to add to every single square to make the color changes appear out of sync?

- A. `animation-transform`
- B. `data-attribute`
- ☒ C. `timing-delay`
- ☒ D. None of the above properties are valid for this purpose.

## Question 33

Consider the following four statements describing roles of the OAuth 2.0 authorization framework:

- (1) The resource server hosts the protected resources, and is capable of accepting and responding to protected resource requests using access tokens.
- (2) The client is the entity that grants access to a protected resource.
- (3) The authorization server issues access tokens to the client after successfully authenticating the resource owner and obtaining authorization.
- (4) The resource owner makes protected resource requests on behalf of the client and with its authorization.