

Name: _____ Date: _____

Data Architects: 7th Grade JavaScript Logic & CSS Grid Quiz

Calculate DOM manipulations and layout proportions using advanced CSS Box Model and event listener logic for responsive digital environments.

1. Which CSS property combination would be most efficient for creating a responsive 3-column layout where the sidebars stay a fixed width but the middle column absorbs all remaining space?

- A. display: flex; justify-content: space-between;
- B. display: grid; grid-template-columns: 200px 1fr 200px;
- C. float: left; width: 33.3%;
- D. position: absolute; left: 0; right: 0;

2. In the JavaScript event loop, an 'event listener' attached to a button will execute its callback function immediately when the script loads, regardless of user interaction.

- A. True
- B. False

3. To change the background color of an element with the ID 'header' to 'midnightblue' whenever a user's mouse enters the area, which JavaScript method is used to target the ID?

- A. document.getElementsByTagName('header')
- B. document.querySelector('.header')
- C. document.getElementById('header')
- D. document.classes.header

4. If an HTML element has a set width of 300px, 20px of padding on all sides, and a 5px border, what is the total calculated space it occupies in the standard W3C Box Model?

- A. 300px
- B. 325px
- C. 350px
- D. 350px width by 50px height

5. In CSS, which pseudo-class is utilized to apply styles to an anchor tag (<a>) only after the user has already clicked and navigated to that destination?

- A. :hover
- B. :active
- C. :visited
- D. :focus

6. Consider this JS code: let x = 10; x += 5; x = x * 2; What is the final value of x?

- A. 20
- B. 25

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- C. 15
- D. 30

7. In Semantic HTML, using the <section> tag provides the exact same SEO and accessibility benefits as using a <div> tag.

- A. True
- B. False

8. Which of the following JavaScript statements would successfully hide an element from view but keep its space reserved in the page layout?

- A. `element.style.display = 'none';`
- B. `element.style.visibility = 'hidden';`
- C. `element.style.opacity = '1';`
- D. `element.remove();`

9. When creating an internal link to a specific part of a page, what HTML attribute must be present on the target element to match the 'href' value (e.g.,)?

- A. `class='bio'`
- B. `id='bio'`
- C. `src='bio'`
- D. `alt='bio'`

10. External CSS files are linked within the <body> section of an HTML document to ensure the styles load after the content.

- A. True
- B. False