1. Viewport Units (vw, vh, vmin, vmax):

Example: Imagine you're designing a landing page, and you want a hero section to take up the full height of the viewport, with a width of 80%.

**CSS**

.hero-section {

height: 100vh; /\* Full height of the viewport \*/

width: 80vw; /\* 80% of the viewport width \*/

}

2. Pixel (px):

Example: You have a navigation bar, and you want the height of each navigation item to be 40 pixels.

css

.nav-item {

height: 40px; /\* Fixed height of 40 pixels \*/

}

3. Percentage (%):

Example: In a two-column layout, you want the left column to take up 30% of the container's width.

css

.left-column {

width: 30%; /\* Takes up 30% of the container's width \*/

}

4. Rem (rem):

Example: You're setting the base font size for your entire website to be 16 pixels. For better scalability, you want your headings to be 2.5 times the base font size.

Rem (short for “root-em”) units dictate an element's font size relative to the size of the root element.

css

h1 {

font-size: 2.5rem; /\* 2.5 times the root (html) font size \*/

}

5. Flex Layout Units (fr):

Example:- You have a grid layout, and you want the first column to take twice the available space as the second column.

Css:-

.grid-container {

display: grid;

grid-template-columns: 2fr 1fr; /\* First column takes 2 times the space of the second \*/

}

6. Auto:

Example: You have an image in a container, and you want the image to automatically adjust its height while maintaining its aspect ratio.

Css:-

img {

height: auto; /\* Adjusts height while maintaining aspect ratio \*/

}

7. Ch (ch):

Example: You're creating a form, and you want the input fields to be 20 characters wide.

Css:-

.input-field {

width: 20ch; /\* Width is equivalent to 20 characters \*/

}

8. Em (em):

Example: You're setting the base font size for a specific section to be 18 pixels. For consistency, you want the margin of your paragraphs in that section to be 1.5 times the base font size.

Css:-

.section {

font-size: 18px; /\* Base font size for the section \*/

}

p {

margin-bottom: 1.5em; /\* 1.5 times the font size of its parent (section) \*/

}

These examples provide a more concrete understanding of where and why you might use each CSS unit in real-life scenarios. The choice of units depends on the specific requirements of your design and the relationships between different elements on your webpage.