CSS UNITS

A. Absolute Units

Absolute units are those that are always the same in any context. ‘px’ (the only absolute unit you should be use) is an absolute unit because the size of a pixel doesn’t change relative to anything else on the page.

B. Relative Units

Relative units are units that can change based on their context.

1) rem and em

3. * `rem` **(Root em):***

- Satu unit `rem` setara dengan ukuran font elemen root (biasanya elemen `<html>` html { }). Jadi, jika ukuran font elemen root adalah 16px, 1rem setara dengan 16px.
- secara umum, jika tidak ada pengaturan khusus untuk ukuran font elemen root, browser akan menggunakan nilai default, yang sering kali adalah sekitar 16px.
- Ini berguna untuk membuat desain yang responsif karena berkaitan dengan ukuran font root.
- Contoh: `font-size: 1.5rem;` akan mengatur ukuran font sebesar 1.5 kali ukuran font root.

4. * `em` **:***

- Satu unit `em` setara dengan ukuran font elemen parent.
- Misalnya, jika ukuran font elemen induk adalah 14px, dan elemen anaknya menggunakan `1.5em`, maka ukurannya akan menjadi 21px (14px * 1.5).
- `em` berguna untuk menyesuaikan ukuran elemen berdasarkan ukuran font elemen parent.

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2) Viewport

1. * `vh` **(Viewport Height):***

- Satu unit `vh` setara dengan 1% dari tinggi viewport (tinggi area tampilan pengguna).
- Contoh: `height: 50vh;` akan mengatur tinggi elemen tersebut sebesar setengah tinggi viewport.

2. * `vw` **(Viewport Width):***

- Satu unit `vw` setara dengan 1% dari lebar viewport (lebar area tampilan pengguna).
- Contoh: `width: 25vw;` akan mengatur lebar elemen tersebut sebesar seperempat lebar viewport.

C. Additional

Data type	Description
`<integer>`	An `<integer>` is a whole number such as `1024` or `-55`.
`<number>`	A `<number>` represents a decimal number — it may or may not have a decimal point with a fractional component. For example, `0.255`, `128`, or `-1.2`.
`<dimension>`	A `<dimension>` is a `<number>` with a unit attached to it. For example, `45deg`, `5s`, or `10px`. `<dimension>` is an umbrella category that includes the `<length>`, `<angle>`, `<time>`, and `<resolution>` types.
`<percentage>`	A `<percentage>` represents a fraction of some other value. For example, `50%`. Percentage values are always relative to another quantity. For example, an element's length is relative to its parent element's length.

D. Suggestion

1) https://codyloyd.com/2021/css-units/

suggestions

My personal opinion is as I stated above: use `rem` for font-size and `px` for everything else. In my mind `em` is more confusing than it's really worth and can lead to confusing size-related bugs. Whether or not someone on Stack Overflow thinks people are likely to change their browser's font-size is also largely irrelevant. If the option is there, we should code in such a way that respects the user's wishes, so at least for font-size I recommend using `rem`. However, the decision to use `rem` or `px` for things like margin and padding comes down to design preference. Consider the following:

2) https://css-tricks.com/fun-viewport-units/

Some example like Responsive Typography, Scroll Indiactor, etc.