

# CSS Units

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## CSS Units

CSS has several different units for expressing a length.

Many CSS properties take "length" values, such as `width` , `margin` , `padding` , `font-size` , etc.

Length is a number followed by a length unit, such as 10px, 2em, etc.

A whitespace cannot appear between the number and the unit. However, if the value is 0, the unit can be omitted.

For some CSS properties, negative lengths are allowed.

There are two types of length units: absolute and relative.

## Absolute Lengths

The absolute length units are fixed and a length expressed in any of these will appear as exactly that size.

Absolute length units are not recommended for use on screen, because screen sizes vary so much. However, they can be used if the output medium is known, such as for print layout.

Unit	Description	
cm	centimeters	Try it
mm	millimeters	Try it
in	inches (1in = 96px = 2.54cm)	Try it
px *	pixels (1px = 1/96th of 1in)	Try it
pt	points (1pt = 1/72 of 1in)	Try it
pc	picas (1pc = 12 pt)	Try it

\* Pixels (px) are relative to the viewing device. For low-dpi devices, 1px is one device pixel (dot) of the display. For printers and high resolution screens 1px implies multiple device pixels.

## Relative Lengths

Relative length units specify a length relative to another length property. Relative length units scales better between different rendering mediums.

Unit	Description	
em	Relative to the font-size of the element (2em means 2 times the size of the current font)	Try it
ex	Relative to the x-height of the current font (rarely used)	Try it
ch	Relative to width of the "0" (zero)	Try it
rem	Relative to font-size of the root element	Try it
vw	Relative to 1% of the width of the viewport*	Try it
vh	Relative to 1% of the height of the viewport*	Try it
vmin	Relative to 1% of viewport's* smaller dimension	Try it
vmax	Relative to 1% of viewport's* larger dimension	Try it
%	Relative to the parent element	Try it

**Tip:** The em and rem units are practical in creating perfectly scalable layout!

\* Viewport = the browser window size. If the viewport is 50cm wide, 1vw = 0.5cm.

## Browser Support

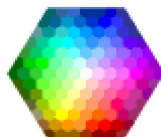
The numbers in the table specify the first browser version that fully supports the length unit.

Length Unit					
em, ex, %, px, cm, mm, in, pt, pc	1.0	3.0	1.0	1.0	3.5
ch	27.0	9.0	1.0	7.0	20.0
rem	4.0	9.0	3.6	4.1	11.6
vh, vw	20.0	9.0	19.0	6.0	20.0
vmin	20.0	9.0*	19.0	6.0	20.0
vmax	26.0	Not supported	19.0	7.0	20.0

**Note:** Internet Explorer 9 supports vmin with the non-standard name: vm.

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