



JONAS.IO  
SCHMEDTMANN

# ADVANCED CSS AND SASS

TAKE YOUR CSS TO THE NEXT LEVEL!



@JONASSCHMEDTMAN

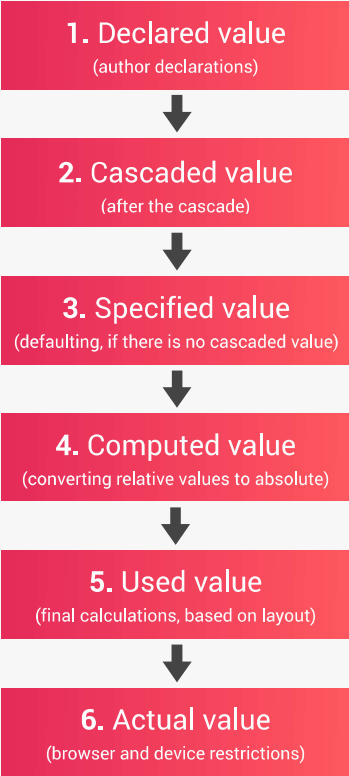
## SECTION

HOW CSS WORKS: A LOOK BEHIND THE SCENES

## LECTURE

HOW CSS IS PARSED, PART 2: VALUE PROCESSING

# HOW CSS VALUES ARE PROCESSED



width (paragraph)	padding (paragraph)	font-size (root)	font-size (section)	font-size (paragraph)
140px 66%	—	—	1.5rem	—
66%	—	16px (Browser default)	1.5rem	—
66%	0px (Initial value)	16px	1.5rem	24px
66%	0px	16px	24px (1.5 * 16px)	24px
184.8px	0px	16px	24px	24px
185px	0px	16px	24px	24px

```
<div class="section">  
  <p class="amazing">CSS is absolutely amazing</p>  
</div>
```

```
.section {  
  font-size: 1.5rem;  
  width: 280px;  
  background-color: orangered;  
}  
  
p {  
  width: 140px;  
  background-color: green;  
}  
  
.amazing {  
  width: 66%;  
}
```



(Let's analyse the green paragraph)

# HOW UNITS ARE CONVERTED FROM RELATIVE TO ABSOLUTE (PX)

	Example (x)		How to convert to pixels		Result in pixels
Font-based	% (fonts)	150%	—————	$x\% * \text{parent's computed font-size}$	24px
	% (lengths)	10%	—————	$x\% * \text{parent's computed width}$	100px
	em (font)	3em	—————	$x * \text{parent computed font-size}$	72px (3 * 24)
	em (lengths)	2em	—————	$x * \text{current element computed font-size}$	48px
	rem	10rem	—————	$x * \text{root computed font-size}$	160px
Viewport-based	vh	90vh	—————	$x * 1\% \text{ of viewport height}$	90% of the current viewport height
	vw	80vw	—————	$x * 1\% \text{ of viewport width}$	80% of the current viewport width

## 4. Computed value (converting relative values to absolute)

```

html, body {
  font-size: 16px;
  width: 80vw;
}

header {
  font-size: 150%;
  padding: 2em;
  margin-bottom: 10rem;
  height: 90vh;
  width: 1000px;
}

header-child {
  font-size: 3em;
  padding: 10%;
}
    
```

# CSS VALUE PROCESSING: WHAT YOU NEED TO KNOW

- Each property has an initial value, used if nothing is declared (and if there is no inheritance — see next lecture);
- Browsers specify a **root font-size** for each page (usually 16px);
- Percentages and relative values are always converted to pixels;
- Percentages are measured relative to their parent's **font-size**, if used to specify font-size;
- Percentages are measured relative to their parent's **width**, if used to specify lengths;
- em are measured relative to their **parent** font-size, if used to specify font-size;
- em are measured relative to the **current** font-size, if used to specify lengths;
- rem are always measured relative to the **document's root** font-size;
- vh and vw are simply percentage measurements of the viewport's height and width.