CSS3

BORDER-RADIUS

The CSS3 **border-radius property** allows you to apply rounder corners to elements without using images.

longhand vs shorthand border-radius

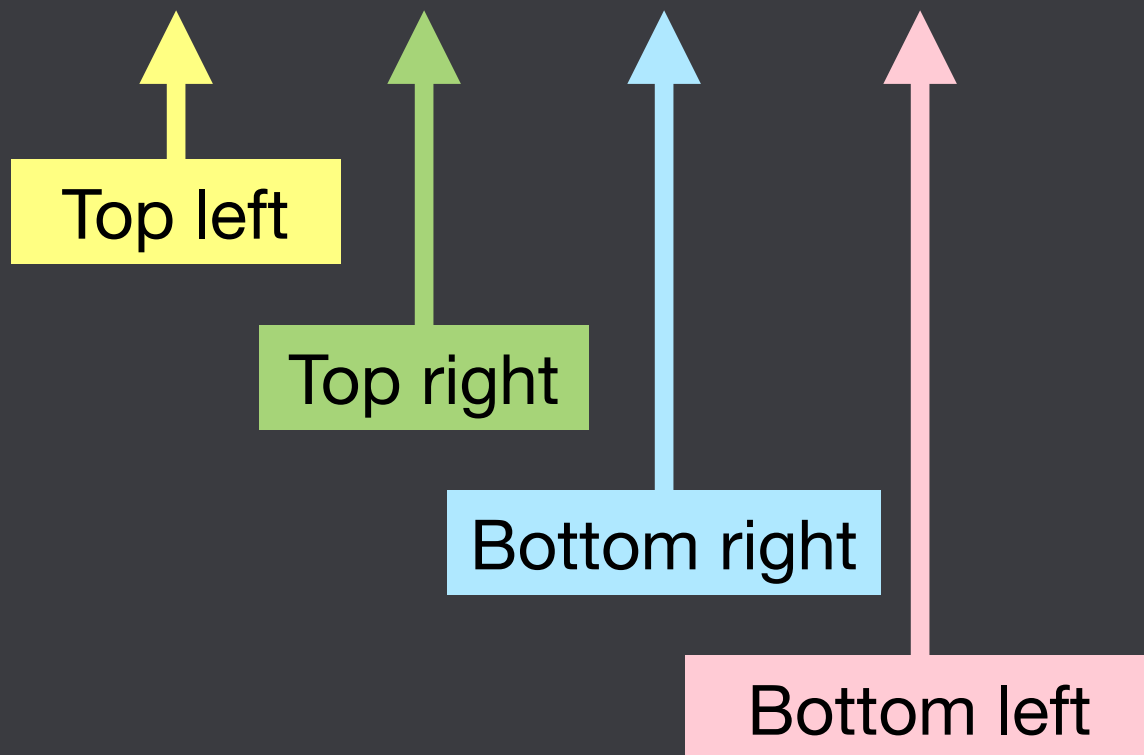The longhand versions of border-radius are very complicated. It is far easier to **define border-radius using shorthand properties only**.

Shorthand border-radius - four values

Shorthand border-radius properties can be defined using **four values** - if the box has a unique value for each corner.
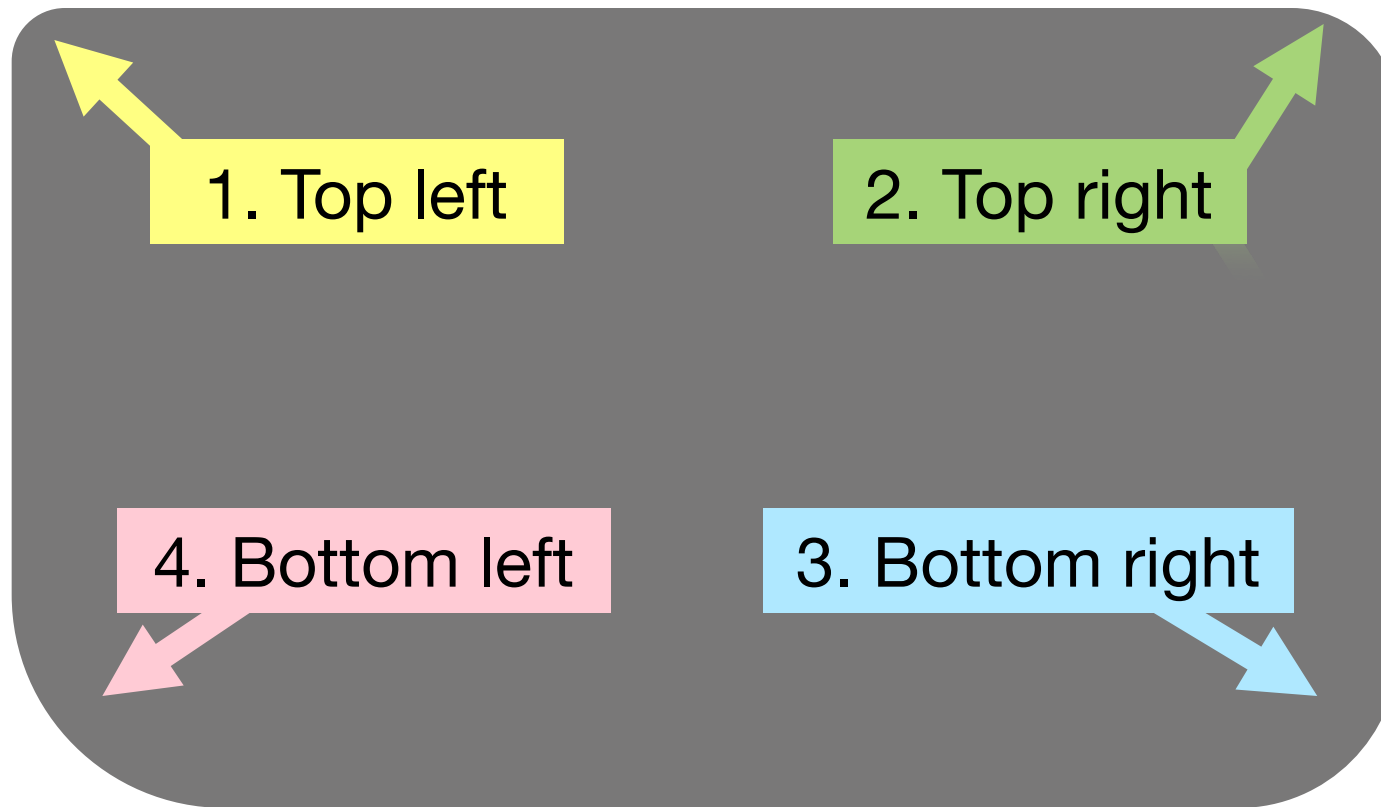
The values are **written in clock-wise order**: top left corner, top right corner, bottom right corner and bottom left corner.

```css
/* border-radius example */
p { border-radius: 10px 20px 30px 40px; }
```

Top left

Top right

Bottom right

Bottom left

Four unique values

1. Top left
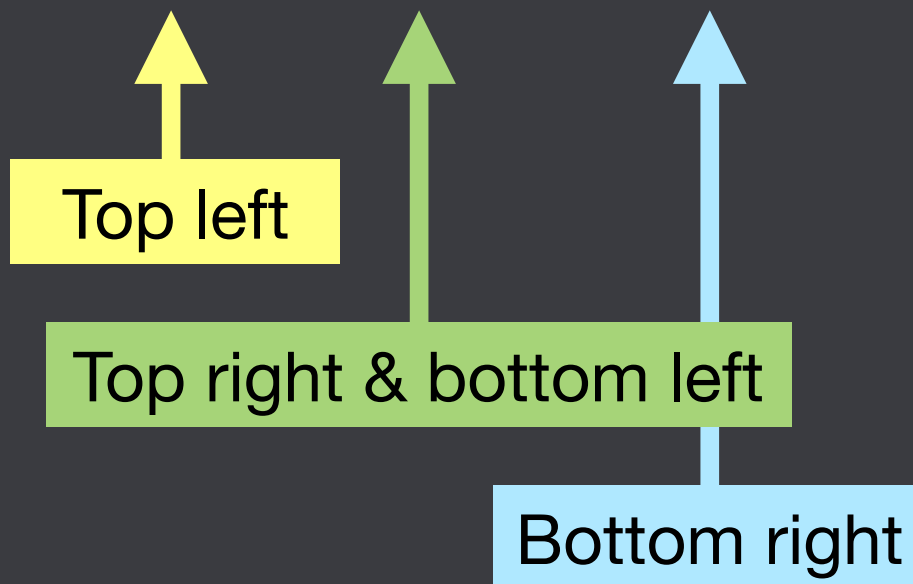2. Top right
3. Bottom right
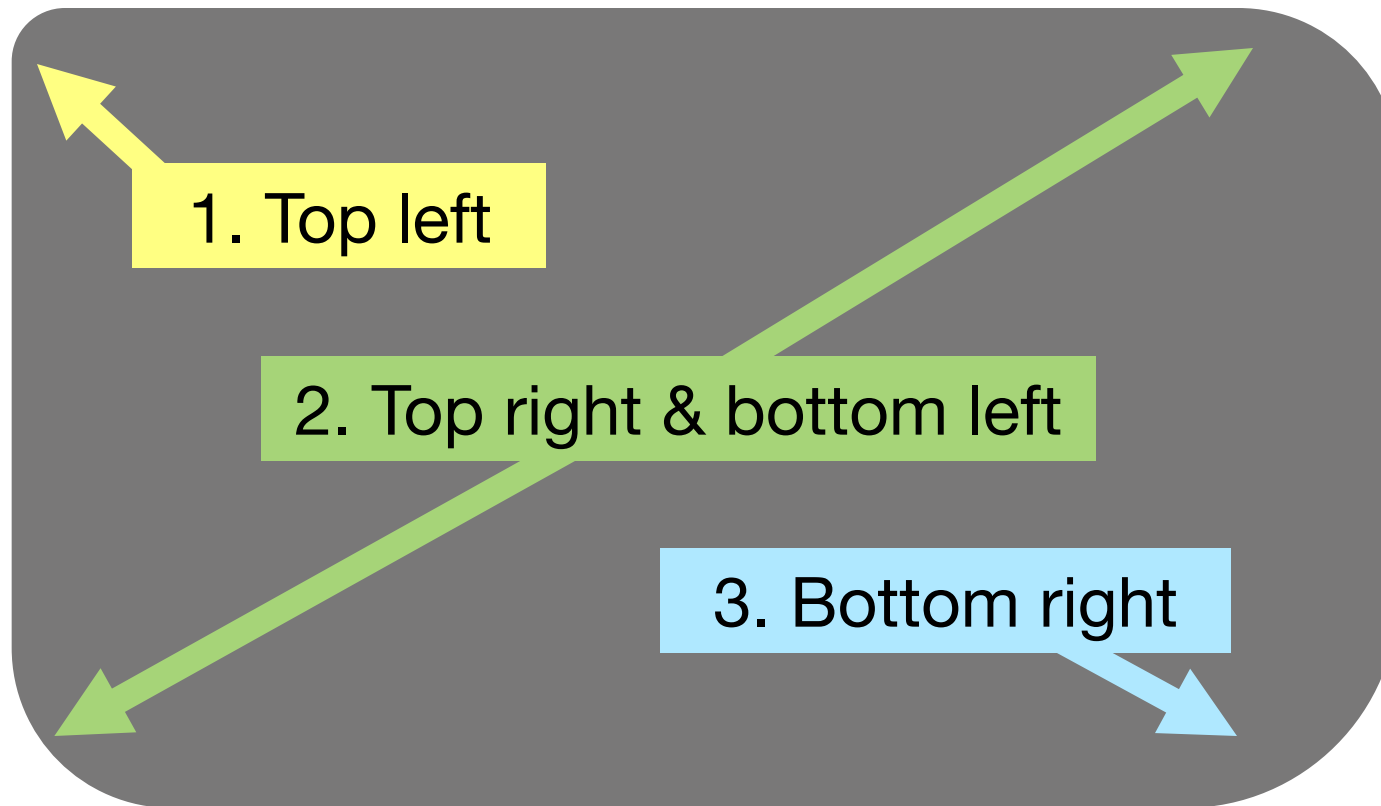4. Bottom left

Shorthand border-radius - three values

Shorthand border-radius properties can be defined using **three values**.

The **first value** sets the top left, the second value sets both the top right and bottom left, and the third value sets the bottom right.

```css
/* border-radius example */
p { border-radius: 10px 20px 30px; }
```

Top left

Top right & bottom left

Bottom right

Three unique values

Shorthand border-radius - two values

We can use **two values** if the top left & bottom right, and the top right & bottom left are the same.
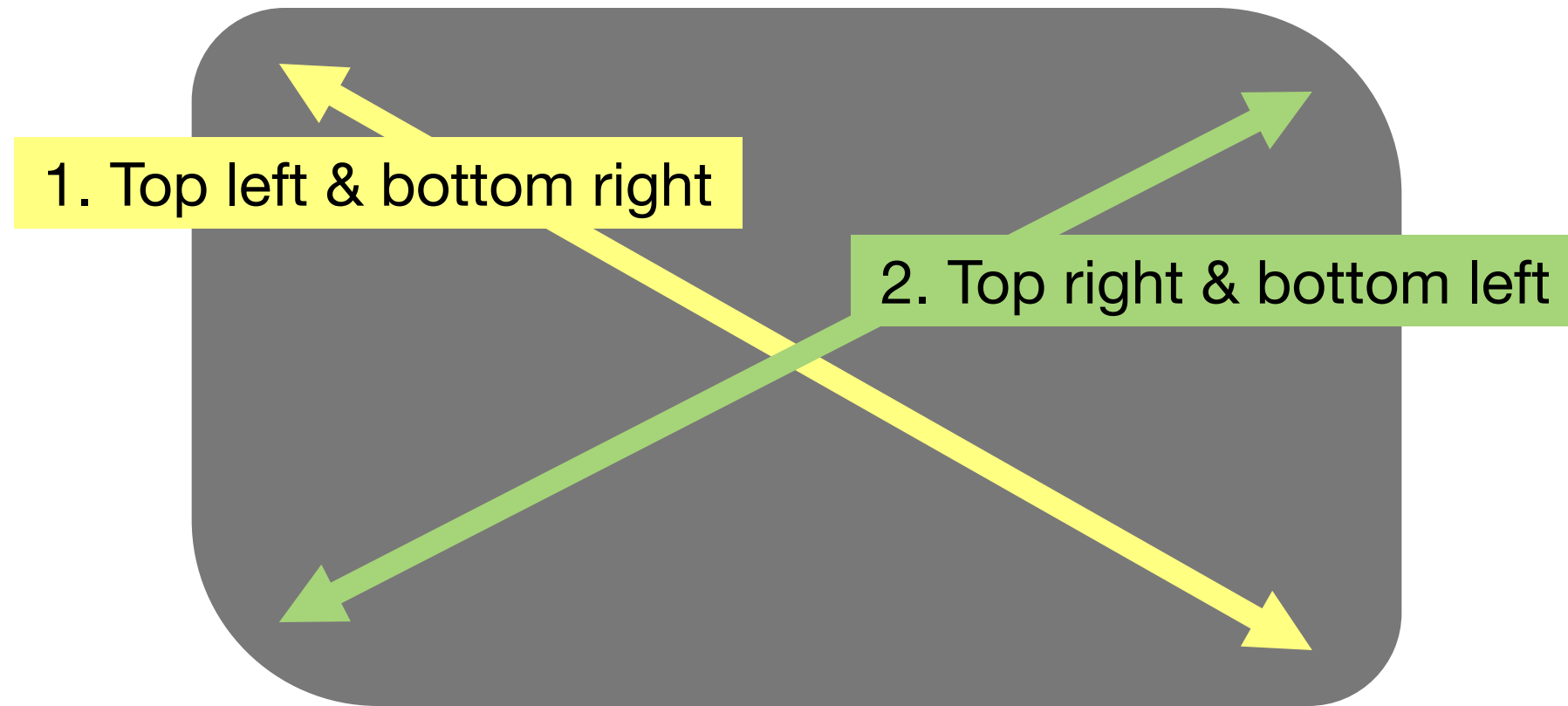
```
/* border-radius example */
p { border-radius: 10px 20px; }
```

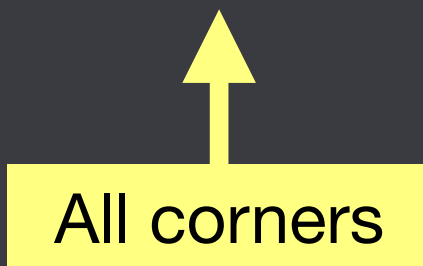Top left & bottom right

Top right & bottom left

Two unique values

1. Top left & bottom right
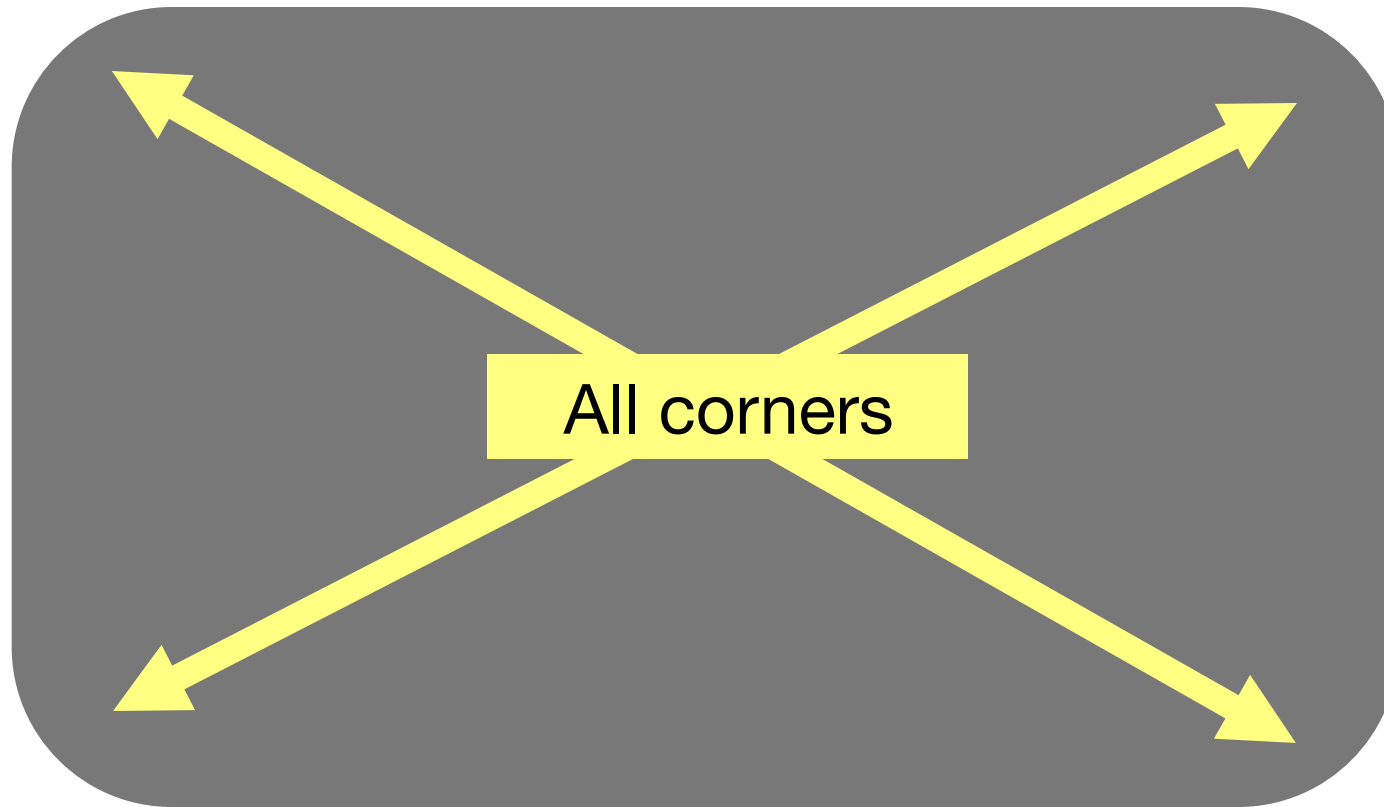
2. Top right & bottom left

Shorthand border-radius - one values

You can also define **one value** for all corners using a single shorthand property.

```css
/* border-radius example */
p { border-radius: 10px; }
```

All corners

One unique value

All corners

Border-radius values

Border-radius values can be defined as **length values or as percentage values**.

```
/* different length values */
p { border-radius: 1em; }
p { border-radius: 2ex; }
p { border-radius: 3px; }
p { border-radius: 4in; }
p { border-radius: 5cm; }
p { border-radius: 6mm; }
p { border-radius: 7pt; }
p { border-radius: 8pc; }
```

Percentage values refer to the **corresponding dimensions** of the border box.

```css
/* percentage values */
p { border-radius: 10%; }
```

Different radii

You can also **define the horizontal and vertical radii** of each corner separately.

Horizontal radii

Vertical radii

Shorthand different radii - four values

The **four horizontal values are defined first** followed by a "/", then the four vertical values.

```css
/* border-radius example */
p
{
    border-radius:
    5px 3px 8px 9px / 4px 6px 3px 5px;
}
```

Top left horizontal

Top right horizontal

Bottom right horizontal

Bottom left horizontal

Top left vertical

Top right vertical

Bottom right vertical

Bottom left vertical

Shorthand different radii - three values

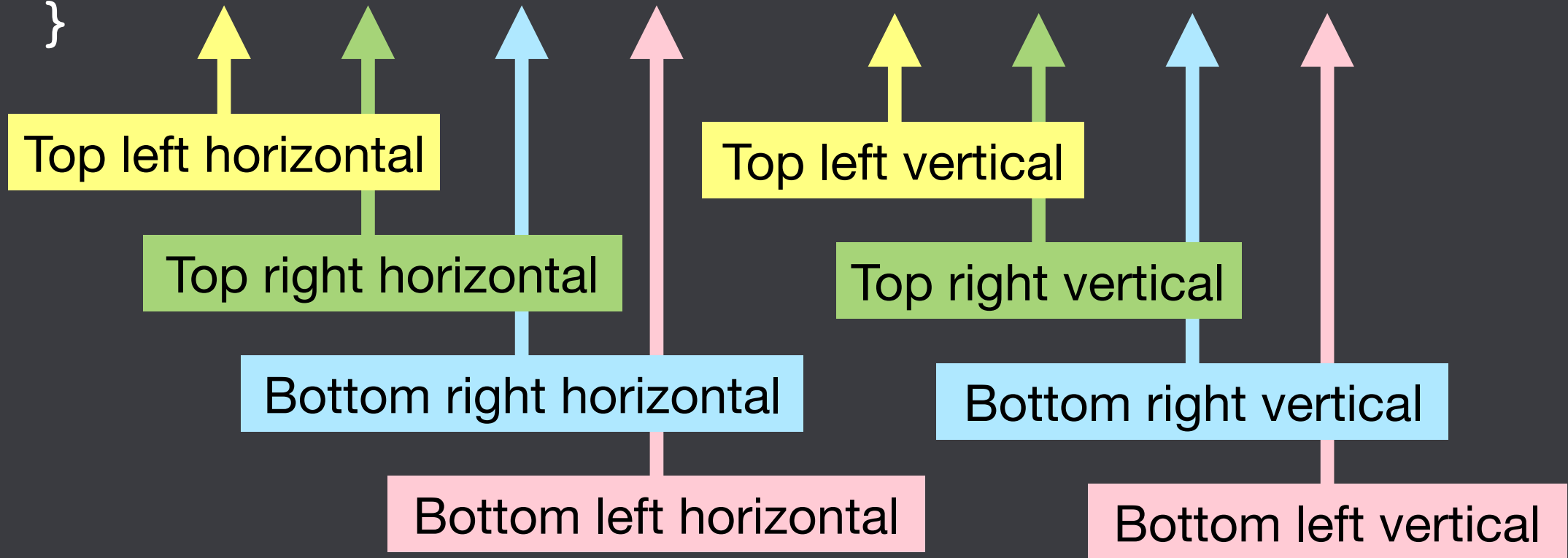The **three horizontal values are defined first** followed by a "/", then the three vertical values.

```css
/* border-radius example */
p
{
    border-radius:
    5px 3px 8px      /      4px 6px 3px;
}
```

Top left horizontal

Top left vertical

Top right + bottom left horizontal

Top right + bottom left vertical

Bottom right horizontal

Bottom right vertical

Shorthand different radii - two values

The **two horizontal values are defined first** followed by a "/", then the two vertical values.

```css
/* border-radius example */
p
{
    border-radius:
    5px 3px  /  4px 5px;
}
```

Top left + bottom right horizontal → 5px

Top right + bottom left horizontal → 3px

Top left + bottom right vertical → 4px

Top right + bottom left vertical → 5px

Shorthand different radii - one values

The **horizontal value is defined first** followed by a "/", then the vertical value.

```css
/* border-radius example */
p
{
    border-radius: 5px / 6px;
}
```

All sides horizontal

All sides vertical

Browser support

CSS3 Border-radius (rounded corners) 📄 - CR

Global   91.41% + 0.01% = 91.42%

unprefixed: 91.29%

Method of making the border corners round

`Current aligned`   `Usage relative`   `Show all`

IE	Edge *	Firefox	Chrome	Safari	Opera	iOS Safari *	Opera Mini *	Android Browser *	Chrome for Android
								4.1	
8			43					4.3	
9		40	44					4.4	
10		41	45	8		8.4		4.4.4	
11	12	42	46	9	32	9.1	8	44	46
	13	43	47		33				
		44	48		34				
		45	49						

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