



Level 4 - CSS3 Styles



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BORDER RADIUS

The **border-radius** property applies rounded corners to borders.



BORDER RADIUS

The base `.box` element we'll be working with:

```
.box {  
  background: grey;  
  height: 50px;  
  width: 200px;  
}
```



BORDER RADIUS

The base `.box` element we'll be working with:

```
.box {  
  background: grey;  
  height: 50px;  
  width: 200px;  
}
```



BORDER RADIUS

Example usage of the `border-radius` property:

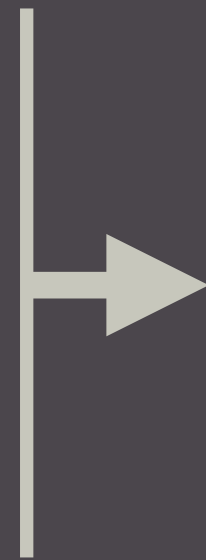
```
.box {  
  border-top-left-radius: 15px;  
  border-top-right-radius: 15px;  
  border-bottom-right-radius: 15px;  
  border-bottom-left-radius: 15px;  
}
```



BORDER RADIUS

Example usage of the `border-radius` property:

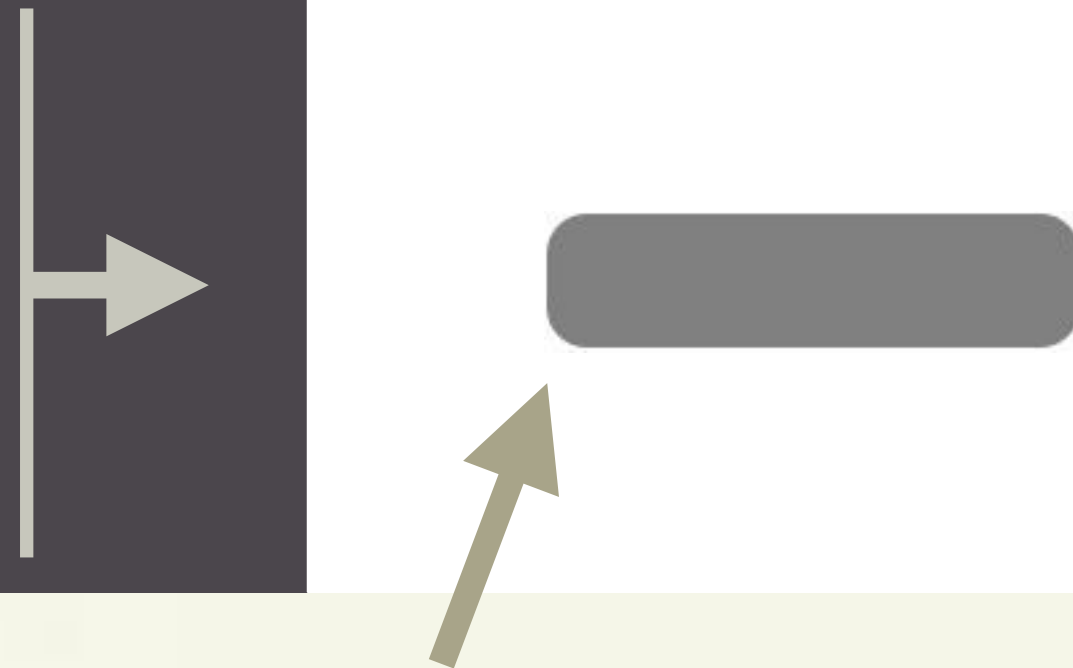
```
.box {  
  border-top-left-radius: 15px;  
  border-top-right-radius: 15px;  
  border-bottom-right-radius: 15px;  
  border-bottom-left-radius: 15px;  
}
```



BORDER RADIUS

Example usage of the `border-radius` property:

```
.box {  
  border-top-left-radius: 15px;  
  border-top-right-radius: 15px;  
  border-bottom-right-radius: 15px;  
  border-bottom-left-radius: 15px;  
}
```



Applies a `15px` rounded corner to our `.box`.

BORDER RADIUS

Example usage of the `border-radius` property:

```
.box {  
  border-radius: 15px;  
}
```



BORDER RADIUS

Example usage of the `border-radius` property:

```
.box {  
  border-radius: 15px;  
}
```



We can use the shorthand property
to specify all sides at once.

BORDER RADIUS

Example usage of the `border-radius` property:


```
.box {  
  border-radius: 4px 15px 12px 10px;  
}
```



BORDER RADIUS

Example usage of the `border-radius` property:

```
.box {  
  border-radius: 4px 15px 12px 10px;  
}
```

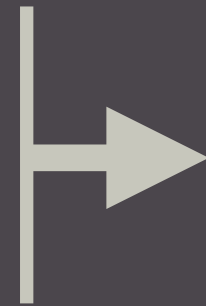


We can specify each `border-radius` value individually, as well.

BORDER RADIUS

Example usage of the **border-radius** property:

```
.box {  
  border-radius: 4px 15px 12px 10px;  
}
```



BORDER RADIUS

Example usage of the **border-radius** property:

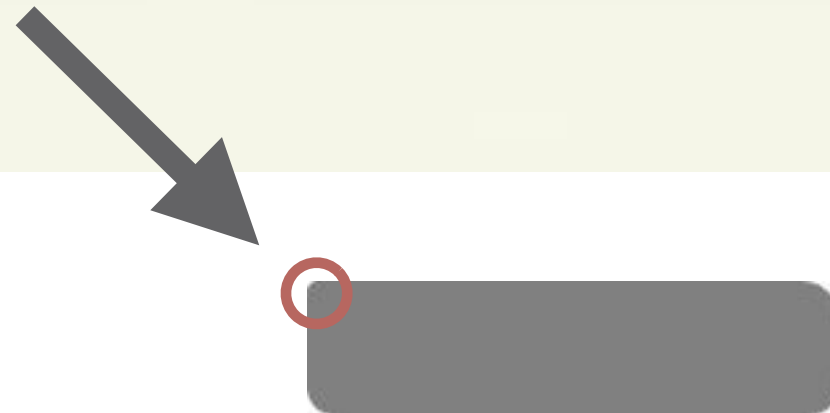
```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

Example usage of the **border-radius** property:

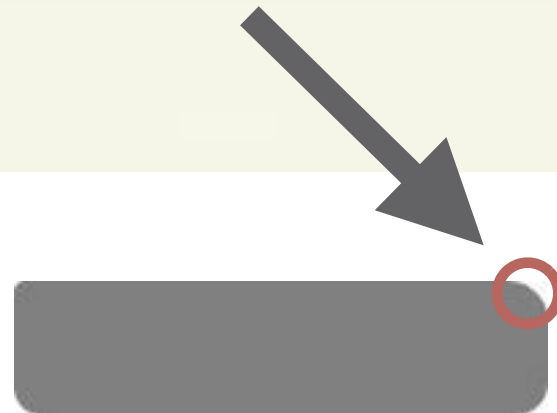
```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

Example usage of the **border-radius** property:

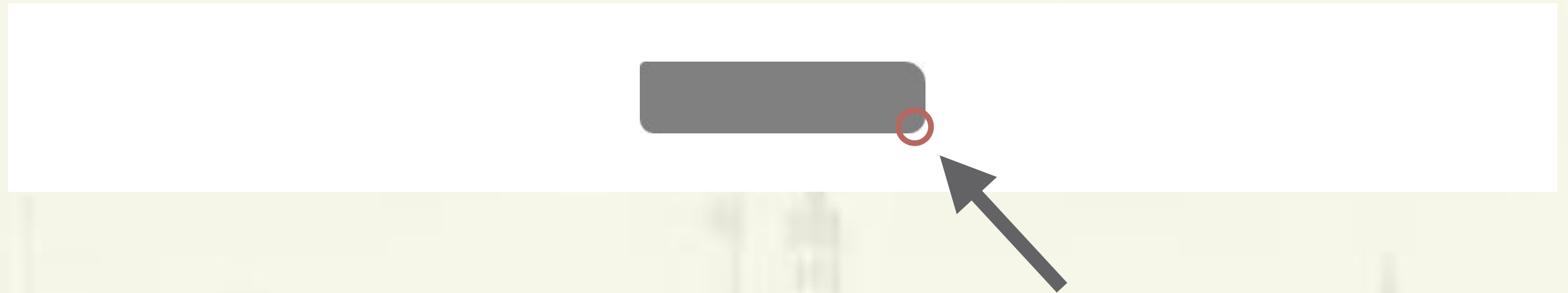
```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

Example usage of the **border-radius** property:

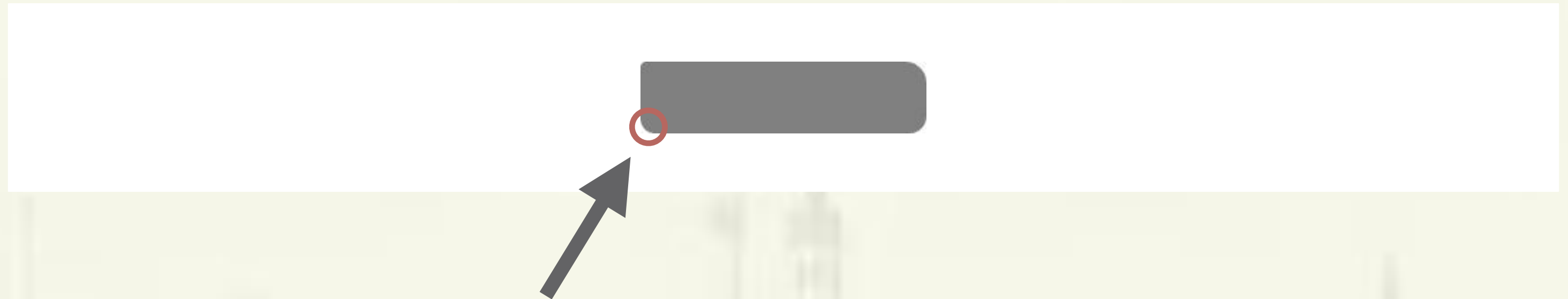
```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

Example usage of the **border-radius** property:

```
border-radius: <top left> <top right> <bottom right> <bottom left>
```



BORDER RADIUS

You can also specify
the **border-radius**
value in percentages.



BORDER RADIUS

Example usage of the `border-radius` property:

```
.box {  
  border-radius: 50%;  
}
```



BORDER RADIUS

Example usage of the `border-radius` property:

```
.box {  
  border-radius: 50%;  
}
```

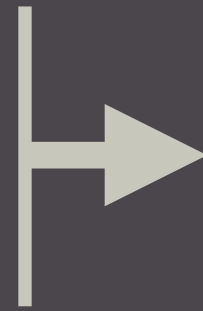


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BOX SHADOW

The **box-shadow** property specifies a shadow on an element.



BOX SHADOW

Example usage of the **box-shadow** property:

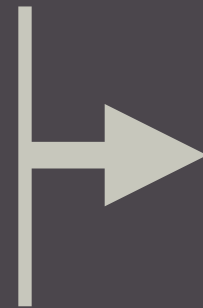
```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



BOX SHADOW

Example usage of the **box-shadow** property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



?

If it is not specified (which is the default), a **drop shadow** is created, rather than an **inset shadow**.

BOX SHADOW

Example usage of the box-shadow property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



If it is not specified (which is the default), a drop shadow is created, rather than an inset shadow.



This icon denotes that the highlighted argument is optional.



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The shadow
offset **x** value.

BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The shadow
offset **y** value.

BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The **blur-radius** alters the blur amount of the shadow, causing it to become *bigger and lighter* (with a larger value).

?

BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The **spread-radius** causes the shadow to *expand or shrink*.

?



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: <inset> <offset-x> <offset-y> <blur-radius> <spread-radius> <color>
```



The **color** of
the shadow.

?



BOX SHADOW

Example usage of the **box-shadow** property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



No `inset` value is specified,
so this is a `drop shadow`.

BOX SHADOW

Example usage of the **box-shadow** property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



A **1px** offset-x value.

BOX SHADOW

Example usage of the **box-shadow** property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```

A 2px offset-y value.

BOX SHADOW

Example usage of the **box-shadow** property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```

A 2px blur-radius.

BOX SHADOW

Example usage of the `box-shadow` property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



No `spread-radius` value is specified, so the drop shadow is the same size as the element.

BOX SHADOW

Example usage of the **box-shadow** property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```

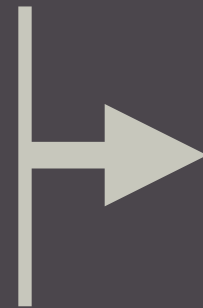


The drop shadow
color is **black**.

BOX SHADOW

Example usage of the **box-shadow** property:

```
.box {  
  box-shadow: 1px 2px 2px #000;  
}
```



BOX SHADOW

What if we wanted the
blur-radius value to instead
be the **spread-radius**?



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: 1px 2px 2px #000;
```



If we wanted this **2px** to be the **spread-radius** instead, we'd need to specify **0** as the **blur-radius** first.

BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: 1px 2px 0 2px #000;
```



BOX SHADOW

Example usage of the **box-shadow** property:

```
box-shadow: 1px 2px 0 2px #000;
```



2px is now the **spread-radius**.

BOX SHADOW

Example of the **blur-radius** and **spread-radius** properties:



blur-radius



spread-radius

BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
  
}
```



BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
}
```



our first **box-shadow**.

BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
    inset 1px 1px 2px blue;  
}
```



BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

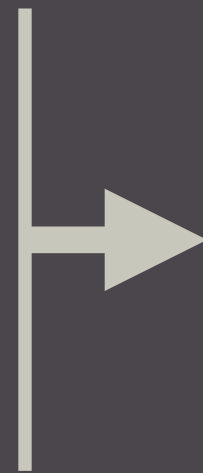
```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
    inset 1px 1px 2px blue;  
}
```

Our second **box-shadow**.

BOX SHADOW

You can specify multiple **box-shadows** via a comma-separated list:

```
.box {  
  box-shadow:  
    1px 1px 2px #000,  
    inset 1px 1px 2px blue;  
}
```



BOX SHADOW

You can also specify negative values:

```
.box {  
  box-shadow: -1px -2px 2px #000;  
}
```



BOX SHADOW

You can also specify negative values:

```
.box {  
  box-shadow: -1px -2px 2px #000;  
}
```

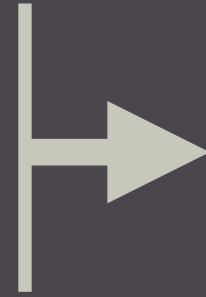


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TEXT SHADOW

The `text-shadow` property is very similar to `box-shadow`, but it applies the shadow to text, as the name implies.



TEXT SHADOW

Example usage of the `text-shadow` property:

```
<h1>I have a shadow!</h1>
```



TEXT SHADOW

Example usage of the `text-shadow` property:

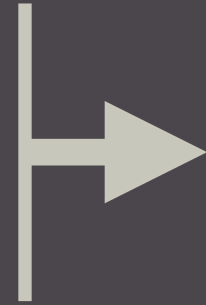
```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



I have a shadow!

TEXT SHADOW

Example usage of the **text-shadow** property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



TEXT SHADOW

Example usage of the `text-shadow` property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



The shadow
offset **x** value.

TEXT SHADOW

Example usage of the `text-shadow` property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



The shadow
offset *y* value.

TEXT SHADOW

Example usage of the `text-shadow` property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



The `blur-radius` alters the blur amount of the shadow, causing it to become *bigger and lighter* (with a larger value).

?



TEXT SHADOW

Example usage of the **text-shadow** property:

```
text-shadow: <offset-x> <offset-y> <blur-radius> <color>
```



The **color** of
the shadow.

?

TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



A 1px offset-x value.

TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



A 2px offset-y value.

TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



A 2px blur-radius.

TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```

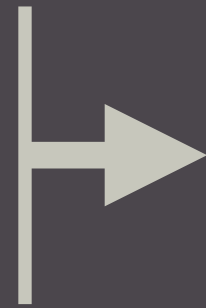


The drop shadow
color is **black**.

TEXT SHADOW

Example usage of the `text-shadow` property:

```
h1 {  
  text-shadow: 1px 2px 2px #000;  
}
```



I have a shadow!

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BOX SIZING

The **box-sizing** property is used to change the default CSS box model, which is used to calculate widths and heights of given elements.



BOX MODEL REFRESHER

- The CSS box model references the design and layout of given HTML elements
- Each HTML element is a “box,” which consists of margins, borders, padding, and the content of the element
- The “box model” refers to how those properties are calculated in conjunction with one another in order to set the element’s dimensions



BOX MODEL REFRESHER

The **content** of the box is where the actual content, the **text** and **images**, is located:



BOX MODEL REFRESHER

The **padding** clears the area around the **content**:



BOX MODEL REFRESHER

The **border** goes around the padding and content:



BOX MODEL REFRESHER

The **margin** clears the area around the **border**:



BOX MODEL REFRESHER

Calculating the width of the `.box`:

```
.box {  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

```
.box { width: 300px; }
```



300px

BOX MODEL REFRESHER

Calculating the width of the `.box`:

```
.box { padding: 10px; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

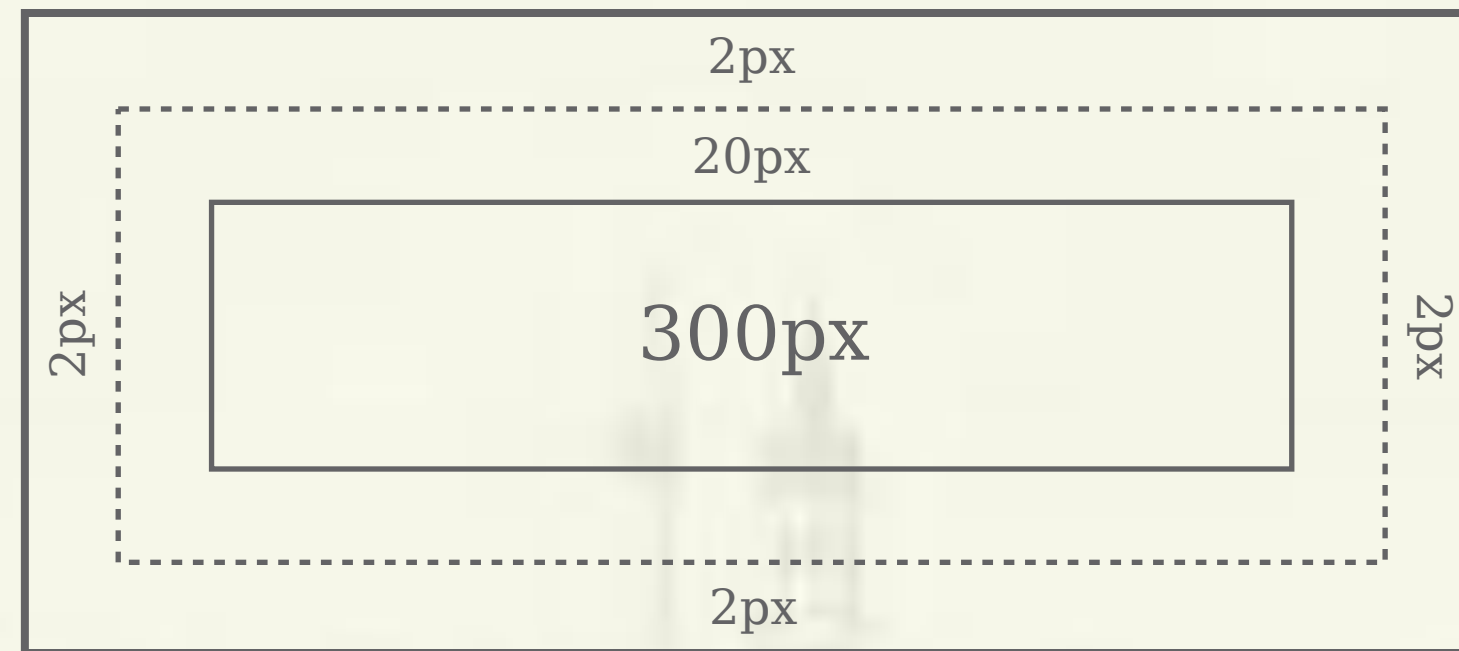
```
.box { padding: 10px; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

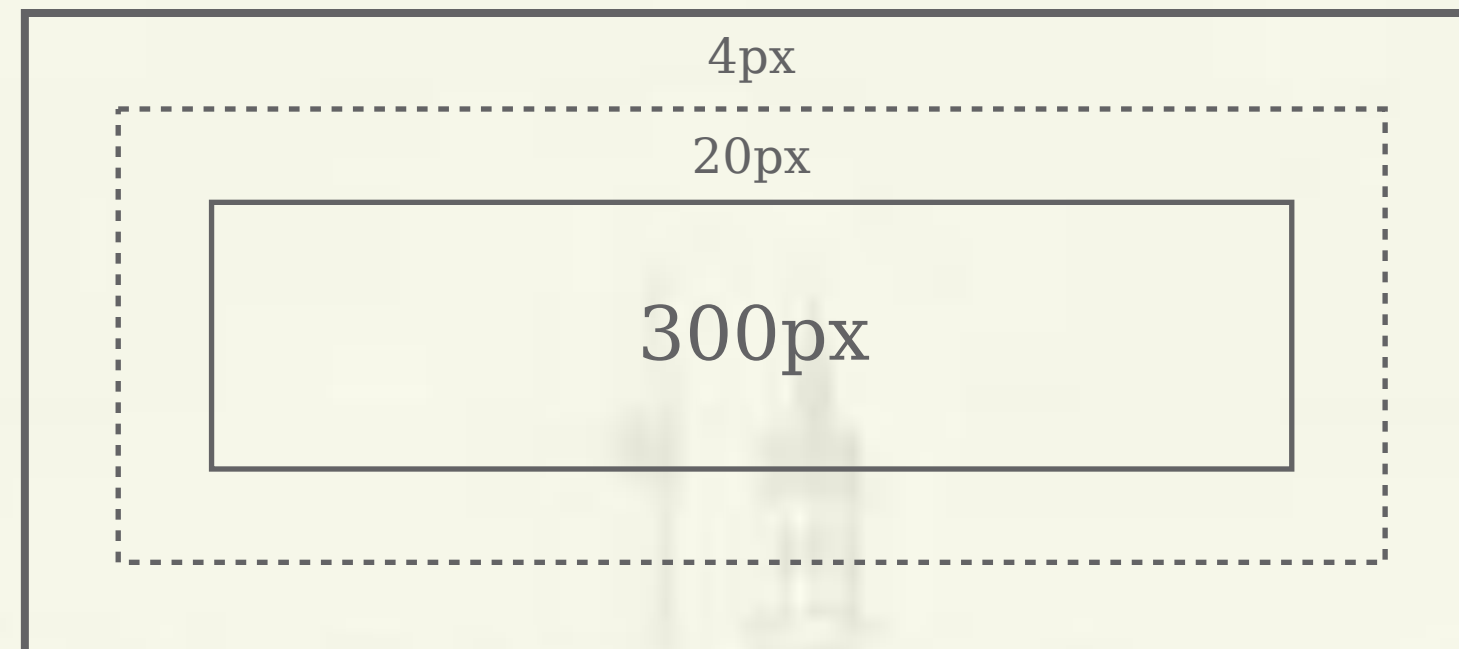
```
.box { border: 2px solid black; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

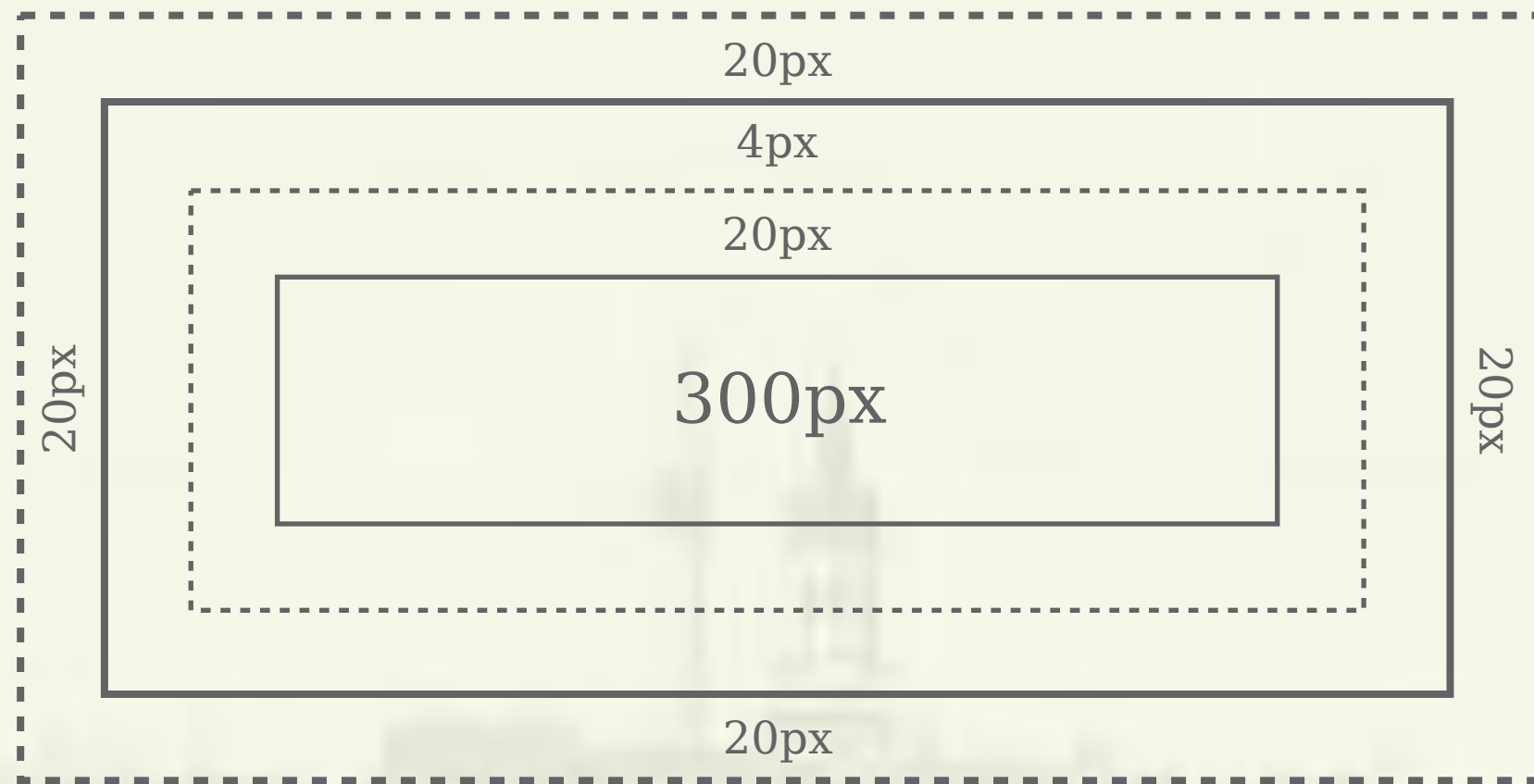
```
.box { border: 2px solid black; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

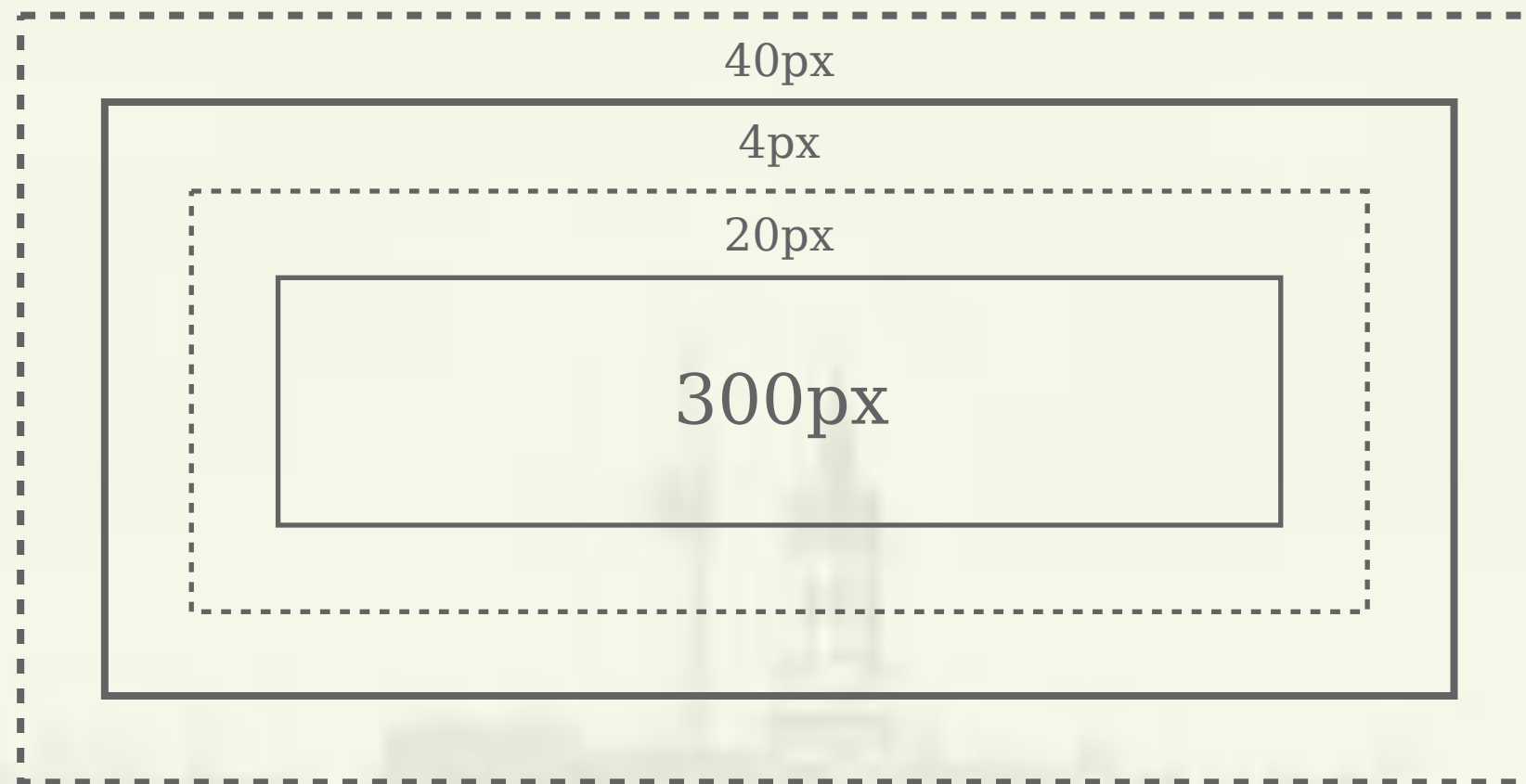
```
.box { margin: 20px; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

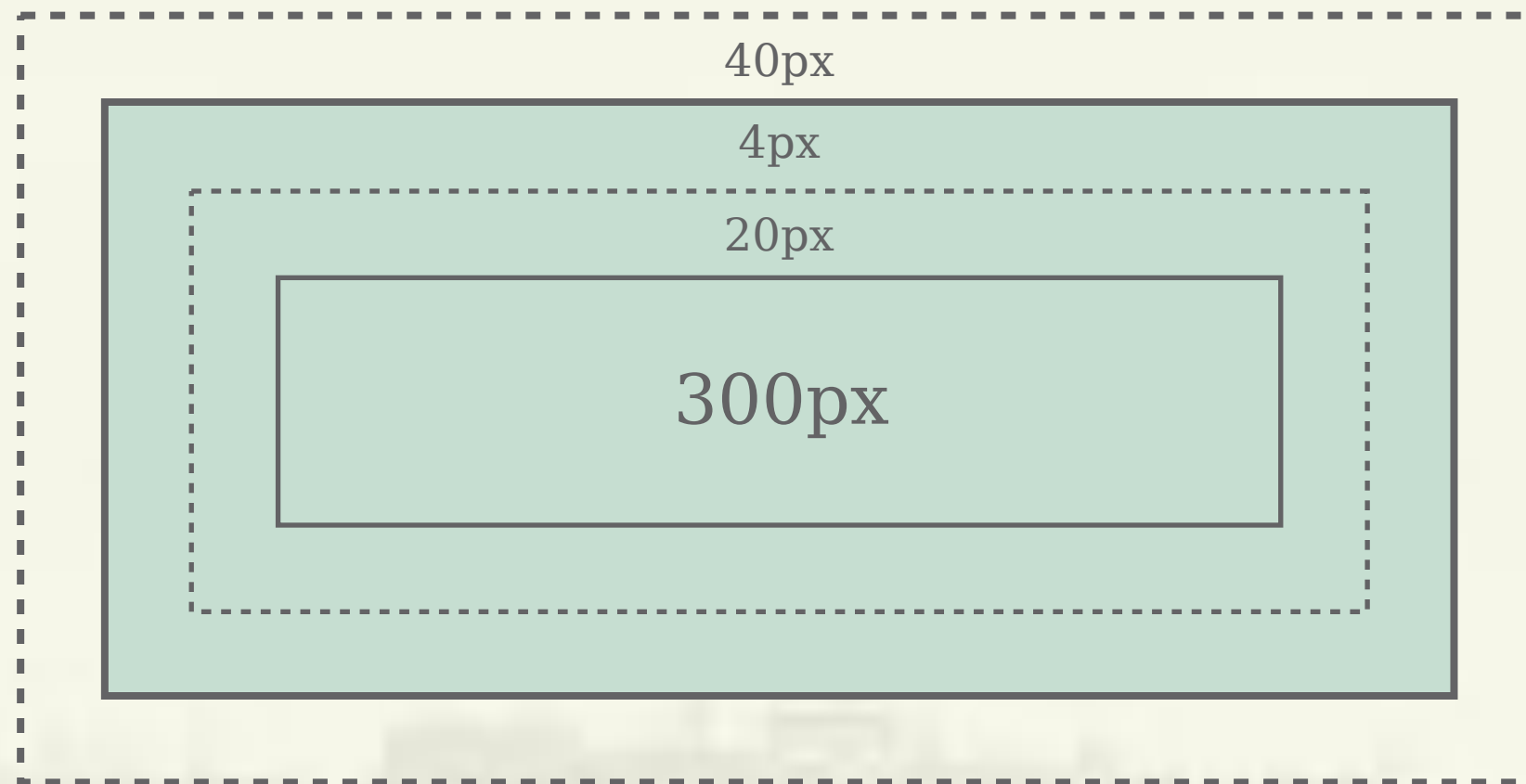
```
.box { margin: 20px; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

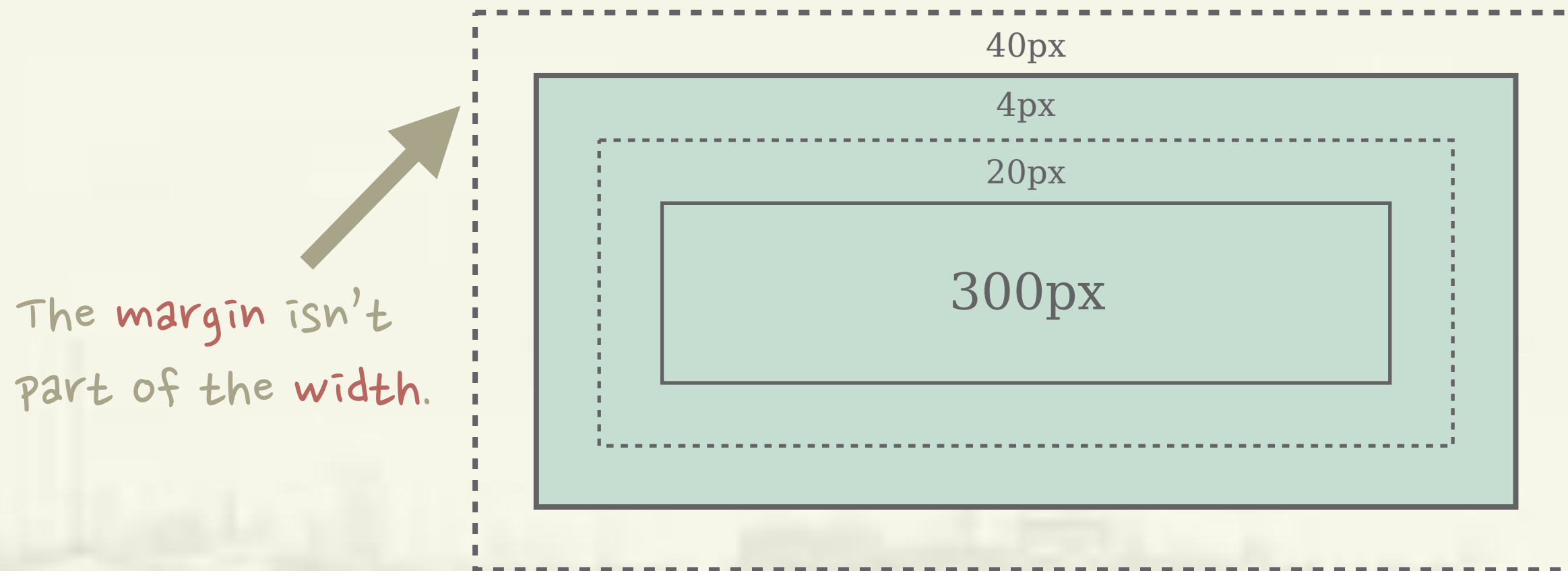
```
.box { margin: 20px; }
```



BOX MODEL REFRESHER

Calculating the width of the `.box`:

```
.box { margin: 20px; }
```

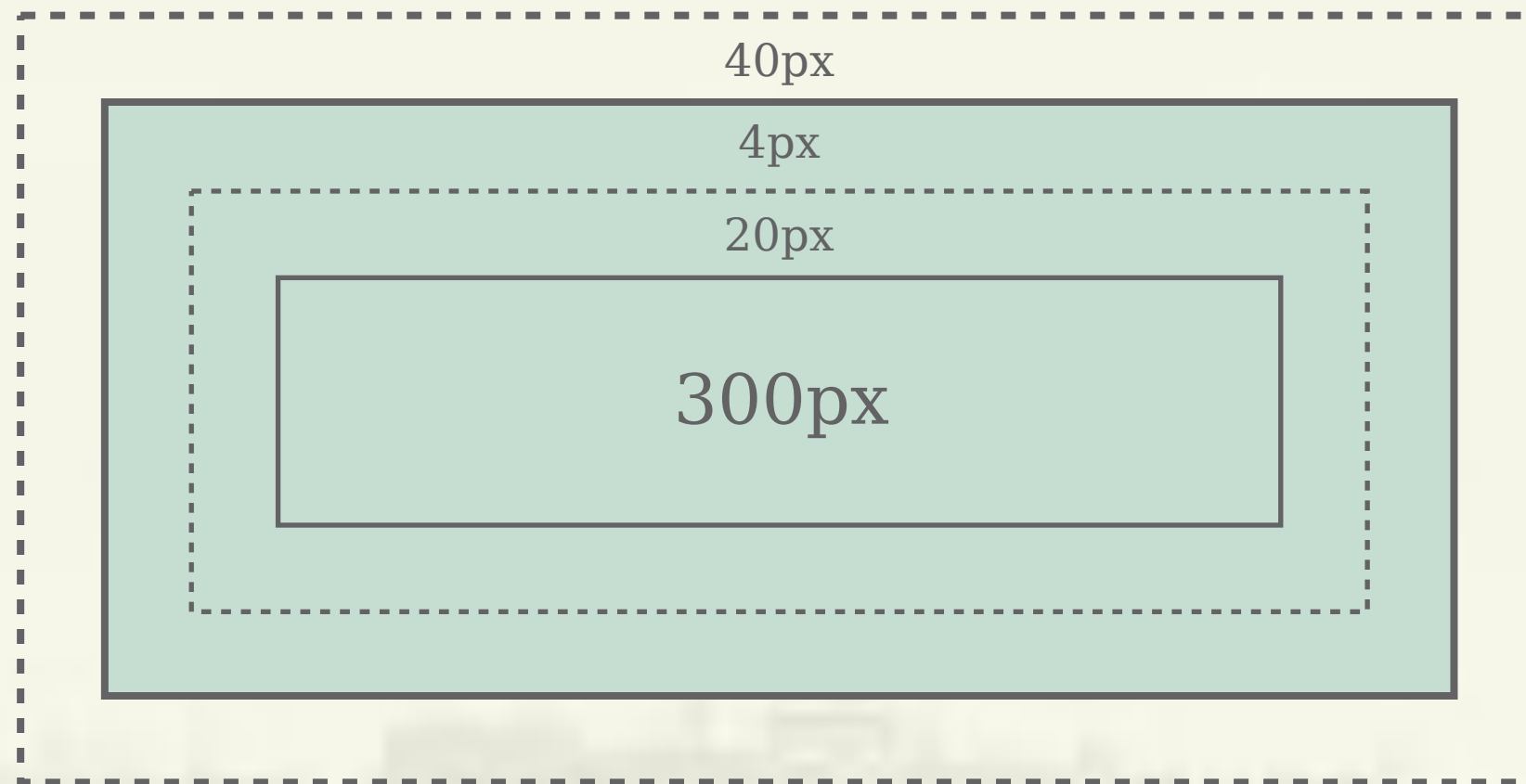


The `margin` isn't part of the `width`.

BOX MODEL REFRESHER

Calculating the width of the `.box`:

$$300 + 20 + 4 = 324\text{px}$$



BOX SIZING

The **box-sizing** property is used to change the default CSS box model, which is used to calculate widths and heights of given elements.



BOX SIZING

There are three different values for **box-sizing**:

- ◉ content-box
- ◉ padding-box
- ◉ border-box



CONTENT-BOX

This is the **default value**. The width and height are measured by including *only* the content, but *not* the border, margin, or padding.



PADDING-BOX

The width and height include the **padding**, but *do not* include the border *or* margin.



PADDING-BOX

Calculating the width of the `.box`:

```
.box {  
  box-sizing: padding-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



PADDING-BOX

Calculating the width of the **.box**:

```
.box {  
  box-sizing: padding-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



The **padding** has been included in the **width** (content) area, so they are treated as one region.

PADDING-BOX

Calculating the width of the `.box`:

```
.box {  
  box-sizing: padding-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



304px

BORDER-BOX

The width and height include the padding and border, but *not* the margin.

BORDER-BOX

Calculating the width of the `.box`:

```
.box {  
  box-sizing: border-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```

BORDER-BOX

Calculating the width of the **.box**:

```
.box {  
  box-sizing: border-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



The **padding** and **border** has been included in the **width** (content) area, so they are treated as one region.

BORDER-BOX

Calculating the width of the `.box`:

```
.box {  
  box-sizing: border-box;  
  border: 2px solid black;  
  margin: 20px;  
  padding: 10px;  
  width: 300px;  
}
```



300px



• FRONT-END FORMATIONS •



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MULTIPLE BACKGROUNDS

CSS3 allows you to apply **multiple backgrounds** to an element. They are stacked in the order in which you specify them.



MULTIPLE BACKGROUNDS

First, specify your **background-images** in a comma-delimited list:

```
.element {  
  background-image: url(bg1.png), url(bg2.png);  
  
}
```



MULTIPLE BACKGROUNDS

Then specify the **background-position** for each, in order:

```
.element {  
  background-image: url(bg1.png), url(bg2.png);  
  background-position: top left, center right;  
  
}
```



MULTIPLE BACKGROUNDS

Finally, specify the **background-repeat** for each:

```
.element {  
  background-image: url(bg1.png), url(bg2.png);  
  background-position: top left, center right;  
  background-repeat: no-repeat, no-repeat;  
}
```



MULTIPLE BACKGROUNDS



4.5 MULTIPLE BACKGROUNDS

MULTIPLE BACKGROUNDS

The first *background-image* we specified.



The second *background-image* we specified.



4.5 MULTIPLE BACKGROUNDS

MULTIPLE BACKGROUNDS

You can also use the shorthand **background**:

```
.element {  
  background:  
    url(bg1.png) top left no-repeat,  
  
}
```



MULTIPLE BACKGROUNDS

You can also use the shorthand **background**:

```
.element {  
  background:  
    url(bg1.png) top left no-repeat,  
    url(bg2.png) center right no-repeat;  
}
```



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COLOR

CSS3 provides multiple ways to work with color:

- RGBa
- HSLa



RGBa

RGB represents the three additive primary colors, red, green, and blue. In CSS3, we can also pass the alpha value (the “a” in **RGBa**), which represents the opacity of a color.



RGBA


Example usage of **rgba**:

```
.element {  
  color: rgba(0, 0, 0, 0.75);  
}
```

RGBA

Example usage of **rgba**:

```
.element {  
  color: rgba(0, 0, 0, 0.75);  
}
```



Here we're specifying a 75% opaque black **color** value.

RGBA

Example usage of `rgba`:

```
.element {  
  color: rgba(0, 0, 0, 0.75);  
}
```

Here we're specifying "0 0 0" as the `RGB` value, which is black.

RGBA

Example usage of `rgba`:

```
.element {  
  color: rgba(0, 0, 0, 0.75);  
}
```

Here we're specifying a "`0.75`"
`alpha` value, which is 75% opaque.

HSLa

CSS3 also adds **HSLa** (Hue, Saturation, Lightness). In addition to providing the hue, saturation, and lightness values, you can specify the alpha value for the opacity of the color.



HSLa

Example usage of **hsla**:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```

HSLa

Example usage of **hsla**:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```



The **hue** value.

HSLa

Example usage of **hsla**:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```



The **saturation** value.

HSLa

Example usage of **hsla**:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```



The **lightness** value.

HSLa

Example usage of **hsla**:

```
.element {  
  color: hsla(240, 100%, 50%, 0.75);  
}
```



The **alpha** value.

HSLa + RGBa

HSLa is more intuitive than RGBa, and it's much easier to make color adjustments on the fly.

HSLa + RGBa

HSLa is more intuitive than **RGBa**, and it's much easier to make color adjustments on the fly.

However, use whichever color utility you prefer.



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OPACITY

CSS3 allows you to specify the **opacity** of an element using the **opacity** property.



OPACITY

Example usage of the **opacity** property:

```
.element {  
  opacity: 0.45;  
}
```



OPACITY

Example usage of the `opacity` property:

```
.element {  
  opacity: 0.45;  
}
```

Here we're specifying a "`0.45`"
`opacity` value, which is 45% opaque.

OPACITY

Example output of the **opacity** property:



OPACITY

Example output of the **opacity** property:



OPACITY

Opacity on an element affects all elements that are nested inside.



OPACITY

Example of the **opacity** property with nested elements:

```
<div class="element">  
  <h2>Hello.</h2>  
</div>
```

```
.element {  
  background: url(bg.jpg) center no-repeat;  
  opacity: 0.45;  
}
```

OPACITY

Example output of the **opacity** property with nested elements:



OPACITY

Example output of the **opacity** property with nested elements:



OPACITY

Example output of the `opacity` property with nested elements:

The `0.45 opacity` on the element affects the text as well as the image.



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GRADIENTS

CSS3 provides the ability to create **gradients**, smooth transitions between two or more colors.



GRADIENTS

There are two types of gradients that browsers support:

- ◉ Linear gradients
- ◉ Radial gradients



LINEAR GRADIENT

To create a **linear gradient**, we need to specify the starting point, the ending point, and optional stop-color points.



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



?

We can specify the direction through an **angle** or a **keyword**.

LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



The **angle** is generally
a degree (e.g. 45deg).

?



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



The **side-or-corner** consists of two keywords:

Horizontal: left or right

Vertical: top or bottom

?

LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
linear-gradient(<angle> to <side-or-corner>, <color-stop>s)
```



The **color-stops** consists of a color and an optional **stop position**, which can be either a percentage or length.

LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



No angle is specified.

LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



The **side-or-corner** is **bottom**, which makes the gradient go from the top to the bottom.

LINEAR GRADIENT

Example usage of a linear-gradient:


KEYWORDS

```
.element {  
  background: linear-gradient(to top, red, yellow);  
}
```

to top  0deg

to bottom  180deg

to right  270deg

to left  90deg



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```

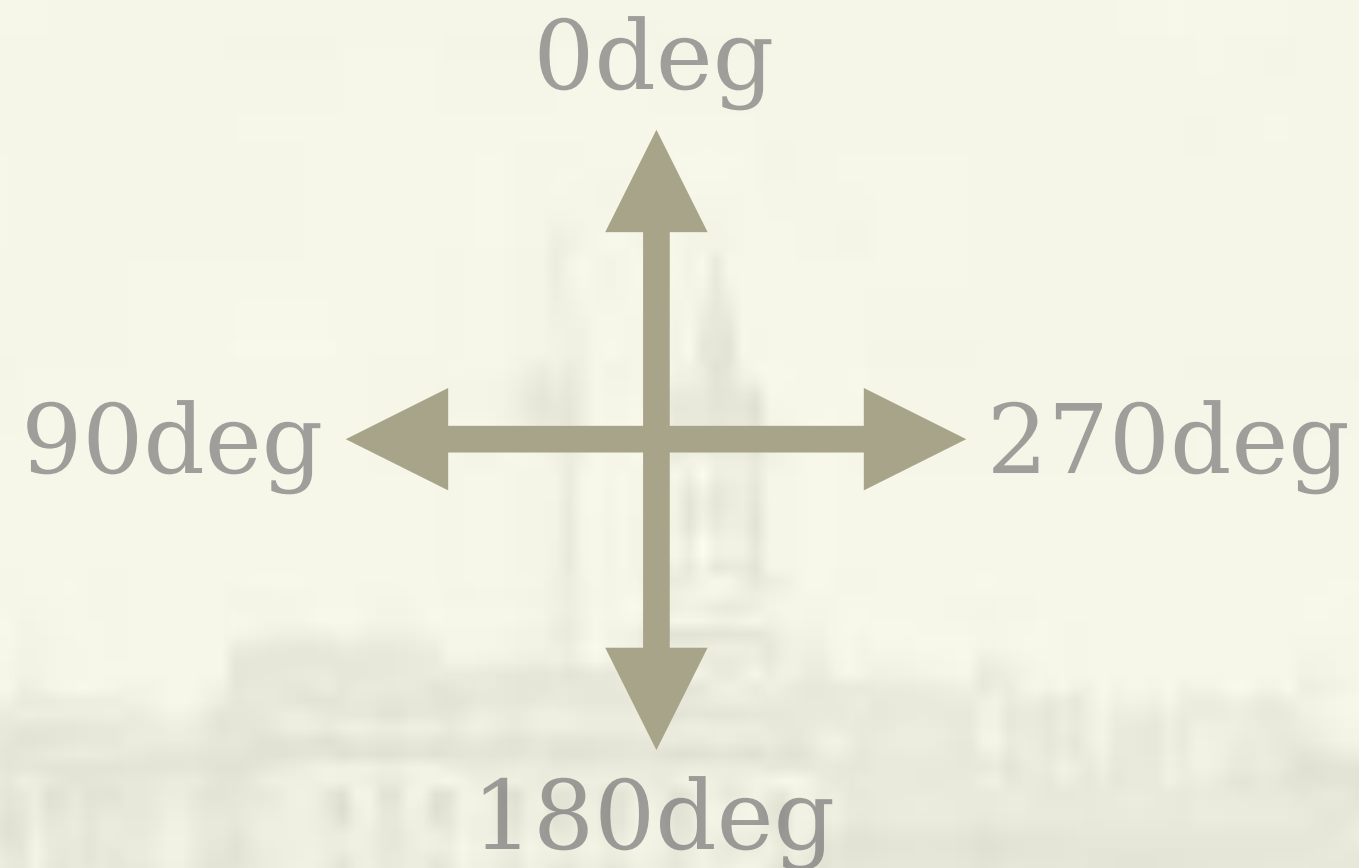


This is translated into **180deg**.

LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



The top of the
gradient starts at **red**.

LINEAR GRADIENT

Example usage of a **linear-gradient**:

```
.element {  
  background: linear-gradient(to bottom, red, yellow);  
}
```



The gradient ends at **yellow** at the bottom.

RADIAL GRADIENT

A radial gradient, unlike a linear gradient, creates a gradient that extends from an origin, the center of the element, extending outward in a circular or elliptical shape.



RADIAL GRADIENT

A **radial-gradient** consists of:

- The center
- The ending shape contour and position
- Color stops



RADIAL GRADIENT

Example usage of a **radial-gradient** in its simplest form:

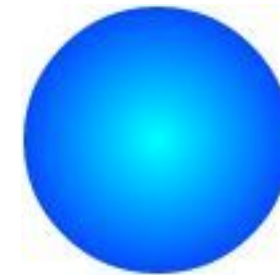
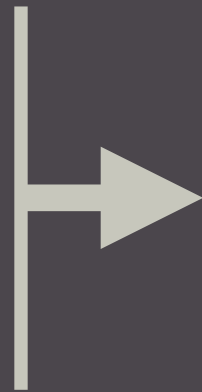
```
.element {  
  background:  
    radial-gradient(aqua, blue);  
}
```



RADIAL GRADIENT

Example usage of a **radial-gradient** in its simplest form:

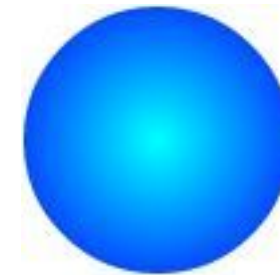
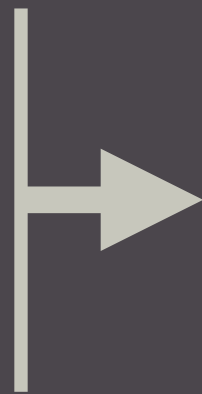
```
.element {  
  background:  
    radial-gradient(aqua, blue);  
}
```



RADIAL GRADIENT

Example usage of a **radial-gradient** in its simplest form:

```
.element {  
  background:  
    radial-gradient(aqua, blue);  
}
```



This creates a two-color elliptical **gradient** that radiates from the **center** by default.

RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



Specify the **shape** or **size** of the gradient.

?

RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



The shape of the gradient;
circle or **ellipse**. The
default is **ellipse**.

?



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



?

The size of the gradient,
which consist of keywords.

RADIAL GRADIENT

Example usage of a radial-gradient:

```
radial-gradient(<shape> <size> <color1> <color2> <stop-colors>)
```

KEYWORDS

closest-side

closest-corner

farthest-side

farthest-corner

The size of the gradient,
which consists of keywords:



RADIAL GRADIENT

Example usage of a radial-gradient:

```
radial-gradient(<shape> <size> <color1> <color2> <stop-colors>)
```

KEYWORDS

closest-side

closest-corner

farthest-side

farthest-corner

The default value.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



The size can also be a
length or **percentage**.

?

RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



Same as **background-position**. Default is **center**.

?

RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
radial-gradient(<shape> <size> at <position>, <color-stop>s)
```



The **color-stops** consists of a color and an optional stop position, which can be either a percentage or length.

RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



The **shape** of the gradient is **circle**, rather than **ellipse**.



RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



The **position** of the gradient is **top left**.

RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



The first **color-stop**
is **aqua**.

RADIAL GRADIENT

Example usage of a **radial-gradient**:

```
.element {  
  background: radial-gradient(circle at top left, aqua, blue);  
}
```



The last **color-stop**
is **blue**.

RADIAL GRADIENT

Example output of the **radial-gradient**:





• FRONT-END FORMATIONS •





Level 5 - Fonts & Interactions



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FONT FACE

Using `@font-face`, we have the ability to provide online fonts for use on our websites.



FONT FACE

Example usage of @font-face:

```
@font-face {
```

}



FONT FACE

We specify the **font-family**, which is what we'll use to call the font:

```
@font-face {  
  font-family: 'OpenSansRegular';  
  
}
```



FONT FACE

We add the location of the font files through the **src** property:


```
@font-face {  
  font-family: 'OpenSansRegular';  
  src: url('OpenSansRegular-webfont.eot');  
  
}
```



FONT FACE

We add the location of the font files through the **src** property:

```
@font-face {  
  font-family: 'OpenSansRegular';  
  src: url('OpenSansRegular-webfont.eot');  
  
}
```



We'll have to specify multiple font types, which can be added as additional **url()**'s to the files.

FONT FACE

We specify the **font-style**:

```
@font-face {  
  font-family: 'OpenSansRegular';  
  src: url('OpenSansRegular-webfont.eot');  
  font-style: normal;  
  
}
```



FONT FACE

We specify the **font-weight**:

```
@font-face {  
  font-family: 'OpenSansRegular';  
  src: url('OpenSansRegular-webfont.eot');  
  font-style: normal;  
  font-weight: normal;  
}
```



FONT FACE

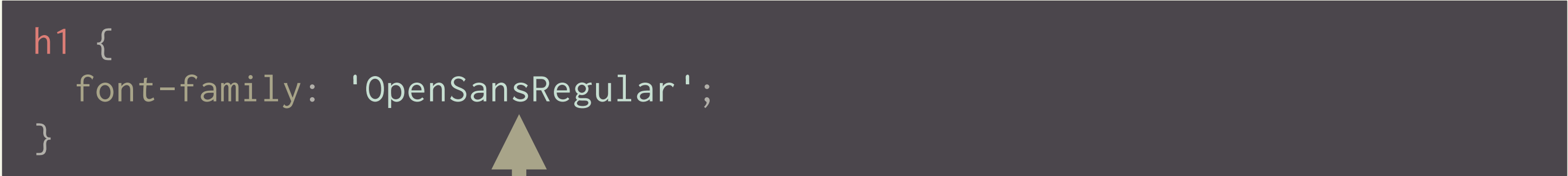
Using `@font-face` in our stylesheet:

```
h1 {  
  font-family: 'OpenSansRegular';  
}
```

FONT FACE

Using `@font-face` in our stylesheet:

```
h1 {  
  font-family: 'OpenSansRegular';  
}
```



We specify the `font-family` as
the same one established in
the `@font-face` call.

FONT FACE


With `@font-face` fonts,
just like any other font
declaration, we'll want
to add fallback fonts.



FONT FACE

Using `@font-face` in our stylesheet with fallbacks:

```
h1 {  
  font-family: 'OpenSansRegular', Helvetica, Arial, sans-serif;  
}
```



Provide fallback fonts here,
as you normally would.

FONT FACE

Using varying weights with `@font-face`:


```
@font-face {  
  font-family: 'OpenSansBold';  
  src: url('OpenSansBold-webfont.eot');  
  font-style: normal;  
  font-weight: normal;  
}
```



FONT FACE

Using varying weights with `@font-face`:

```
@font-face {  
  font-family: 'OpenSansBold';  
  src: url('OpenSansBold-webfont.eot');  
  font-style: normal;  
  font-weight: normal;  
}
```



we're using a **bold** font
family of '**OpenSansBold**'.

FONT FACE

Using varying weights with `@font-face`:

```
h1 {  
  font-family: 'OpenSansBold';  
}
```



We use the bold version by
changing the `font-family`.

FONT FACE

We can alter the `@font-face` call in order to use the `font-weight` and `font-style` properties as usual.



FONT FACE

Using varying weights with `@font-face`:


```
@font-face {  
  font-family: 'OpenSansBold';  
  src: url('OpenSansBold-webfont.eot');  
  font-style: normal;  
  font-weight: normal;  
}
```



FONT FACE

Using varying weights with **@font-face**:

```
@font-face {  
  font-family: 'OpenSansRegular';  
  src: url('OpenSansBold-webfont.eot');  
  font-style: normal;  
  font-weight: normal;  
}
```




We can instead change the **font-family** to the same name as the regular weight version.

FONT FACE

Using varying weights with **@font-face**:

```
@font-face {  
  font-family: 'OpenSansRegular';  
  src: url('OpenSansBold-webfont.eot');  
  font-style: normal;  
  font-weight: normal;  
}
```



We keep the **src url()** the same in order to include the **bold** font weight.

FONT FACE

Using varying weights with `@font-face`:

```
@font-face {  
  font-family: 'OpenSansRegular';  
  src: url('OpenSansBold-webfont.eot');  
  font-style: normal;  
  font-weight: bold;  
}
```




we change the `font-weight`
to `bold`.

FONT FACE

Using varying weights with `@font-face`:

```
h1 {  
  font-weight: bold;  
}
```



We use the bold version by changing the `font-weight` instead of the `font-family`.

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TRANSFORM

Using the **transform** property in CSS3, we can translate, rotate, scale, and skew elements in CSS.



TRANSLATE

You can create a 2D translation using **transform**:

```
.element {  
  transform: translate(20px, 30px);  
}
```



TRANSLATE

You can create a 2D translation using **transform**:

```
.element {  
  transform: translate(20px, 30px);  
}
```



Translate the **.element** 20px
to the right (x-axis).

TRANSLATE

You can create a 2D translation using **transform**:

```
.element {  
  transform: translate(20px, 30px);  
}
```



Translate the **.element**
30px down (y-axis).

TRANSLATE

Example output of the `transform translate`:



TRANSLATE

Example usage of a 2D translation using **transform**:

```
translate(<tx>, <ty>)
```



TRANSLATE

Example usage of a 2D translation using **transform**:

```
translate(<tx>, <ty>)
```



A **<transition-value>**
for the **x-axis**, which
can be either a **length**
or **percentage**.

TRANSLATE

Example usage of a 2D translation using **transform**:

```
translate(<tx>, <ty>)
```



?

A **<transition-value>** for the y-axis, which can be either a length or percentage. If not specified, the value is 0.

TRANSLATE

You can use `translateX` and `translateY` to `translate` the `x` and `y` values individually:

```
.element {  
  transform: translateX(20px);  
}
```

```
.element {  
  transform: translateY(30px);  
}
```


TRANSLATE

You can use `translateX` and `translateY` to `translate` the `x` and `y` values individually:

```
translateX(<tx>)
```

```
translateY(<ty>)
```



ROTATE

With **rotate**, you can rotate an element clockwise around its origin by the specified angle.



ROTATE

Example usage of **rotate**:

```
.element {  
  transform: rotate(45deg);  
}
```



ROTATE

Example usage of **rotate**:

```
.element {  
  transform: rotate(45deg);  
}
```



The element is rotated **45** degrees.

ROTATE

Example output of the `transform rotate`:



SCALE

With **scale**, you can do a 2D scale by a specified unitless number:

```
.element {  
  transform: scale(1.2);  
}
```



SCALE

With **scale**, you can do a 2D scale by a specified unitless number:

```
.element {  
  transform: scale(1.2);  
}
```



The element is scaled to
the unitless number, **1.2**.

SCALE

Example output of the **transform** scale:



SCALE

Exemplified usage of **scale**:

```
scale(<sx>, <sy>)
```

SCALE

Exemplified usage of **scale**:

```
scale(<sx>, <sy>)
```



A unitless number
for the **x-axis**.

SCALE

Exemplified usage of **scale**:

```
scale(<sx>, <sy>)
```



?

A unitless number for the **y-axis**. If not specified, it defaults to the value of **<sx>**.

SCALE

You can use `scaleX` and `scaleY` to `translate` the `x` and `y` values individually:

```
.element {  
  transform: scaleX(1.2);  
}
```

```
.element {  
  transform: scaleY(0.3);  
}
```

SCALE

You can use `scaleX` and `scaleY` to `scale` the `x` and `y` values individually:

```
scaleX(<sx>)
```

```
scaleY(<sy>)
```



SKEW

With **skew**, an element is skewed around the **x** or **y** axis by the **angle** specified.

SKEW

Example usage of **skewX**:

```
.element {  
  transform: skewX(-25deg);  
}
```



SKEW

Example usage of `skewX`:

```
.element {  
  transform: skewX(-25deg);  
}
```



The element is skewed `-25` degrees along the x-axis.

SKEW

Example output of the `transform skewX`:



SKEW

Example usage of **skewX**:

```
skewX(<ax>)
```



SKEW

Example usage of `skewX`:

```
skewX(<ax>)
```



An `<angle>`
for the x-axis.

SKEW

Example usage of **skewY**:

```
skewY(<ay>)
```

SKEW

Example usage of `skewY`:

```
skewY(<ay>)
```



An `<angle>`
for the `y`-axis.

SKEW

Example usage of `skewX` and `skewY`:

```
.element {  
  transform: skewX(25deg);  
}
```

```
.element {  
  transform: skewY(-85deg);  
}
```

SKEW

Example output of the `transform skewX` and `skewY`:



`skewX`

`skewY`

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TRANSITION

CSS3 provides **transitions**, which allow you to transition between two states of a specified element.



TRANSITION

Example usage of **transition**:

```
.element {  
  background-color: black;  
  
}
```



TRANSITION

Example usage of **transition**:

```
.element {  
  background-color: black;  
  
}
```

```
.element:hover {  
  background-color: blue;  
}
```

TRANSITION

Example usage of **transition**:

```
.element {  
  background-color: black;  
  transition: background-color 0.2s ease-in-out;  
}
```

```
.element:hover {  
  background-color: blue;  
}
```



TRANSITION

Example usage of **transition**:

```
.element {  
  background-color: black;  
  transition: background-color 0.2s ease-in-out;  
}
```

```
.element:hover {  
  background-color: blue;  
}
```



The **background-color** transitions
from **black** to **blue** over the period
of 0.2 seconds.

TRANSITION

Example output of the **transition**:



TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



?

The CSS property you
want to **transition**.

TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



?

The **duration** of the **transition**. The default value is **0s**, or 0 seconds.

TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



The timing of the **transition** itself.

?

TRANSITION

Example usage of the shorthand transition property:

```
transition: <property> <duration> <timing-function> <delay>
```

TIMING-FUNCTIONS

- ease
- ease-in
- ease-in-out
- linear
- cubic-bezier
- step-start
- step-end
- steps()



TRANSITION

Example usage of the shorthand **transition** property:

```
transition: <property> <duration> <timing-function> <delay>
```



?

The amount of time to wait between the change that is being requested on a specific property, and the start of the **transition**.

TRANSITION

You can set the **transition** values individually, as well:

```
.element {  
  transition-property: background-color;  
  
}
```



TRANSITION

You can set the **transition** values individually, as well:

```
.element {  
  transition-property: background-color;  
  transition-duration: 0.2s;  
  
}
```



TRANSITION

You can set the **transition** values individually, as well:

```
.element {  
  transition-property: background-color;  
  transition-duration: 0.2s;  
  transition-timing-function: ease-in-out;  
  
}
```



TRANSITION

You can set the **transition** values individually, as well:

```
.element {  
  transition-property: background-color;  
  transition-duration: 0.2s;  
  transition-timing-function: ease-in-out;  
  transition-delay: 0.1s;  
}
```



TRANSITION

Using **all** as the **transition-property**, we can **transition** multiple properties at once.



TRANSITION

Example usage of **transition** using the **all** property:

```
.element {  
  background-color: black;  
  color: white;  
  
}
```

```
.element:hover {  
  background-color: grey;  
  color: black;  
  
}
```



TRANSITION

Example usage of **transition** using the **all** property:

```
.element {  
  background-color: black;  
  color: white;  
  transition: all 0.2s ease-in-out;  
}
```

```
.element:hover {  
  background-color: grey;  
  color: black;  
}
```



TRANSITION

Example usage of **transition** using the **all** property:

```
.element {  
  background-color: black;  
  color: white;  
  transition: all 0.2s ease-in-out;  
}
```

```
.element:hover {  
  background-color: grey;  
  color: black;  
}
```



The **all** property will transition both the **background-color** AND the **color** properties.

TRANSITION

Example output of the **transition** using the **all** property:



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- ◉ Transforms
- ◉ **Transitions**
- ◉ Progressive Enhancement



TABLE OF CONTENTS

- ◉ Font Face
- ◉ Transforms
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- ◉ Progressive Enhancement



PROGRESSIVE ENHANCEMENT

The term “**progressive enhancement**” refers to the use of newer features that **add to** the experience in modern browsers that support those features, but doesn’t **detract from** the experience in older browsers.



PROGRESSIVE ENHANCEMENT

Example of progressive enhancement:

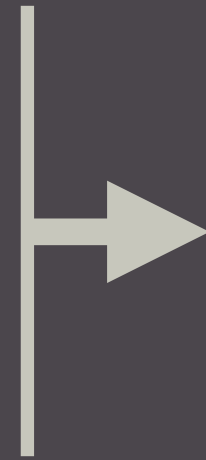
```
.element {  
  background: #ccc;  
  border-radius: 10px;  
  box-shadow: 0 1px 1px rgba(0, 0, 0, 0.75);  
}
```



PROGRESSIVE ENHANCEMENT

Example of progressive enhancement:

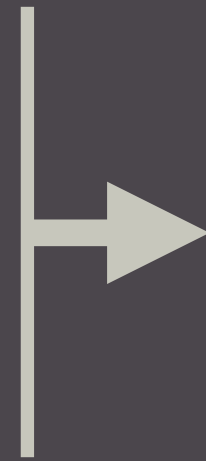
```
.element {  
  background: #ccc;  
  border-radius: 10px;  
  box-shadow: 0 1px 1px rgba(0, 0, 0, 0.75);  
}
```



PROGRESSIVE ENHANCEMENT

Example of progressive enhancement:

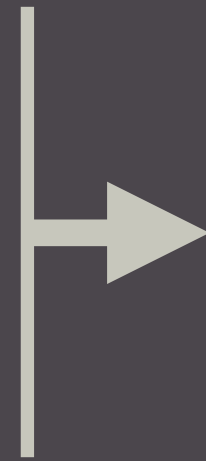
```
.element {  
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PROGRESSIVE ENHANCEMENT

Example of progressive enhancement:

```
.element {  
  background: #ccc;  
  border-radius: 10px;  
  box-shadow: 0 1px 1px rgba(0, 0, 0, 0.75);  
}
```



If the `border-radius` and `box-shadow` properties aren't supported, we still get a usable design.



• FRONT-END FORMATIONS •

