

HTML + CSS



6

Episodio VI

La adaptabilidad (Responsive Web Design)





Contenido

🎯 Responsive web design

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- ◉ Meta / Viewport
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Historia

Historia



This is a screenshot of the Apple website from July 14, 1999. The page has a red sidebar on the left with navigation links. The main content area features a 'Welcome to Apple' header, a BMW CyberDrive advertisement, and a 'What's Hot' section with two articles about Mac OS 8 and Macintosh software releases.

Find It

- Product Information
- Customer Support
- Technology & Research
- Developer World
- Groups & Interests
- Resources Online
- About Apple

Apple Sites Worldwide

- Switzerland
- Taiwan
- Turkey
- UK & Ireland
- United States

Go

Welcome to Apple JULY 14 1999

Introducing CyberDrive

Register today for a free CD-ROM.

What's Hot

Preorder Mac OS 8

Now you can [preorder Mac OS 8](#), described by Macworld as "the most comprehensive update to the Mac OS in years, sporting a bold new look, a speedier Finder, more shortcuts and integrated Internet functions."

Be the First to Know

Learn about new Macintosh software releases the moment they become available. Check [Hot Mac Products](#) to hear about programs like Speed Demon, ReBirth RB-338 and QuickCRC.

EMATE 300

Mobile, Affordable, & Smart

MOVIES FROM MARS

QuickTime VR Takes You Out of this World

Historia



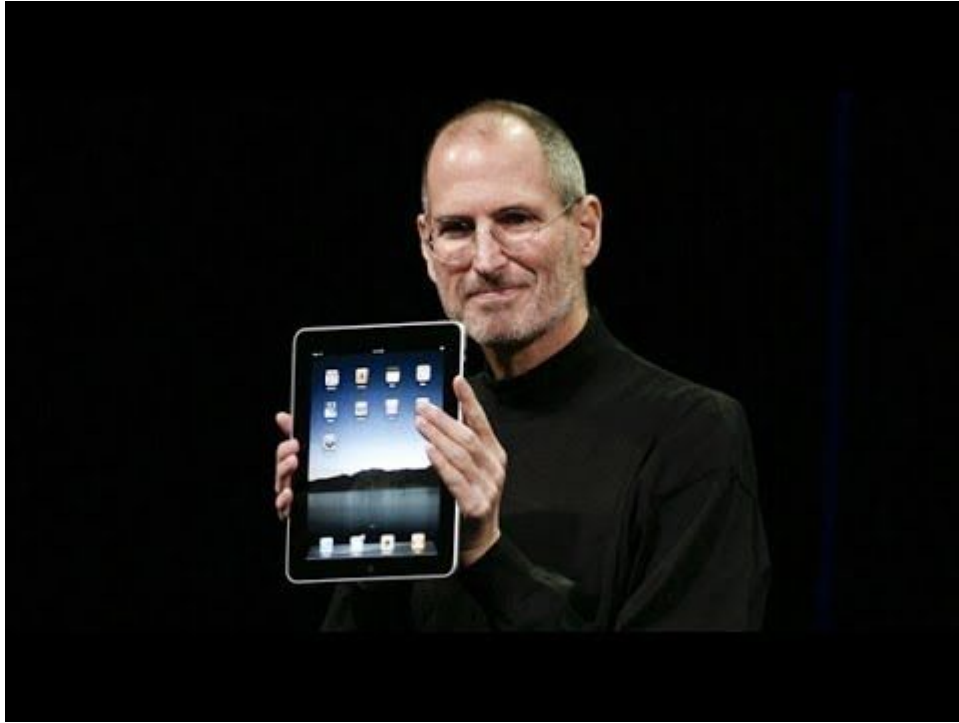
Historia



Historia



Historia



Historia



Historia

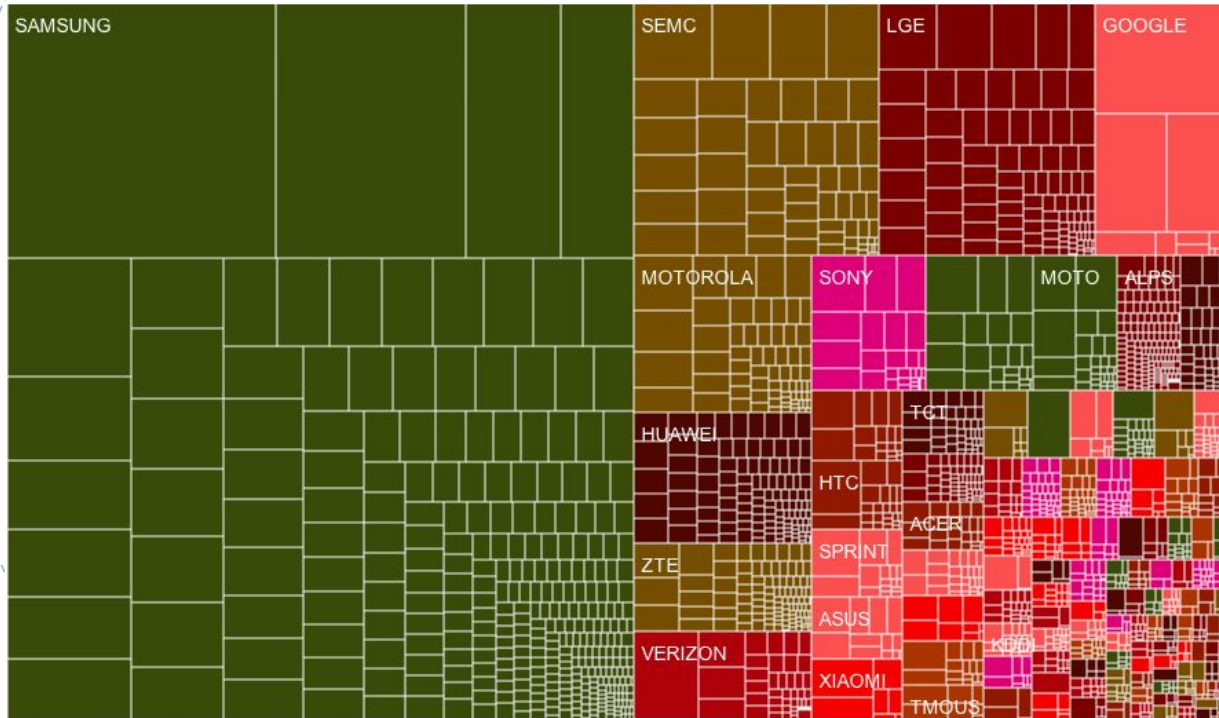


The background is white and decorated with various geometric shapes. In the top left, there is a large orange circle with a dashed red outline, overlapping a solid yellow circle. Below them is a small pink circle. In the top center, there is a large, faint dashed blue circle. In the top right, there is a green circle with a white center, a small orange circle, and a lime green circle with a dashed yellow outline. In the bottom left, there is a green circle with a dashed green outline, a large lime green circle, and a small cyan circle. In the bottom right, there is a large cyan circle with a white center, and a cyan circle with a dashed blue outline.

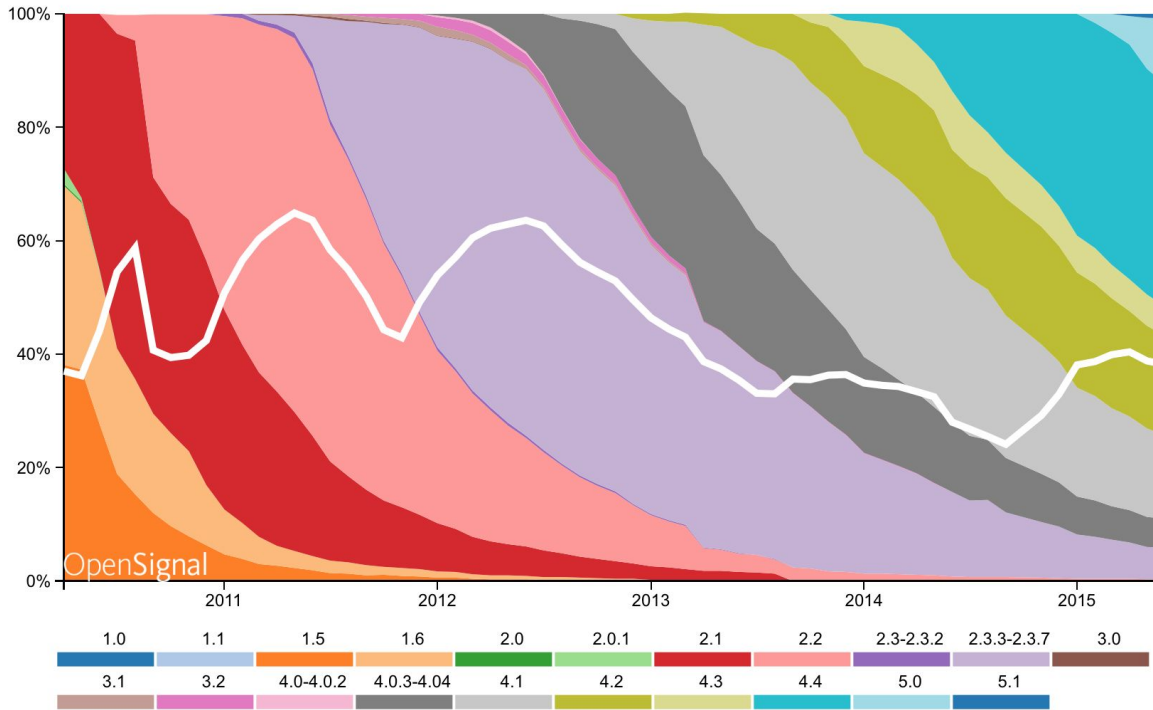
Problemas ¡Fragmentación extrema!



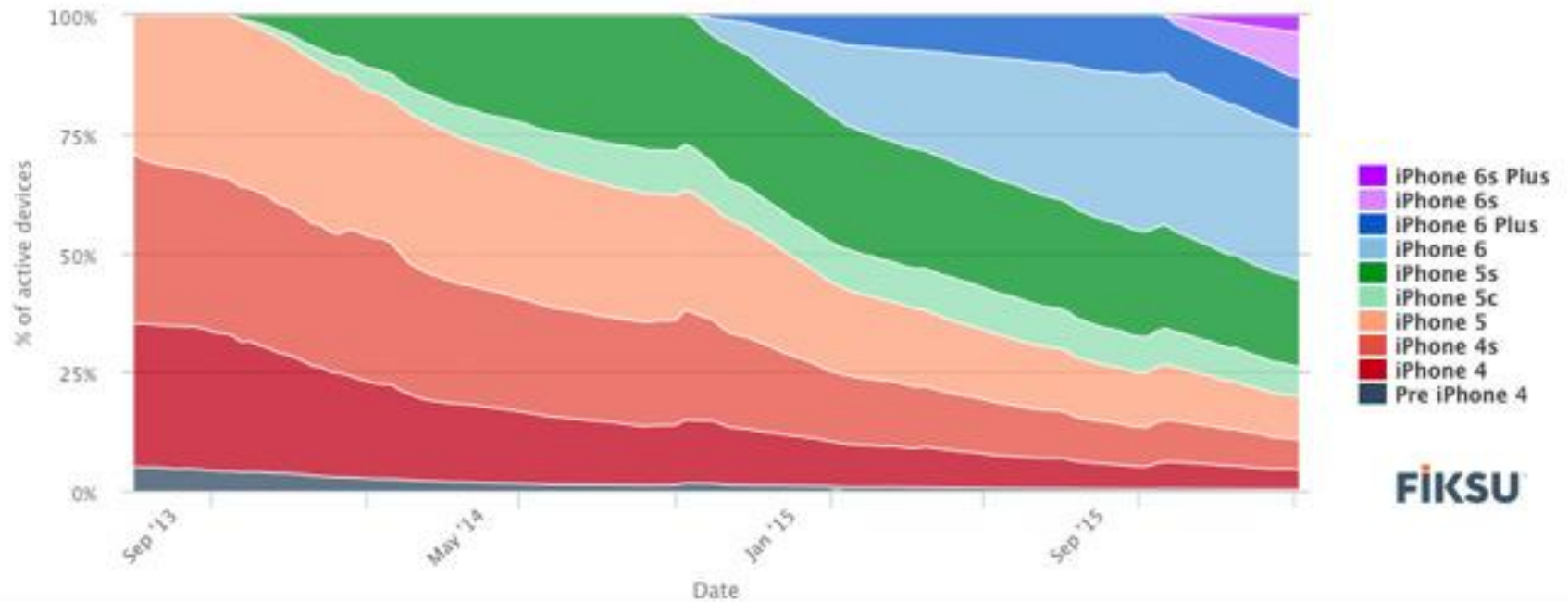
Problema 1: Muchos fabricantes



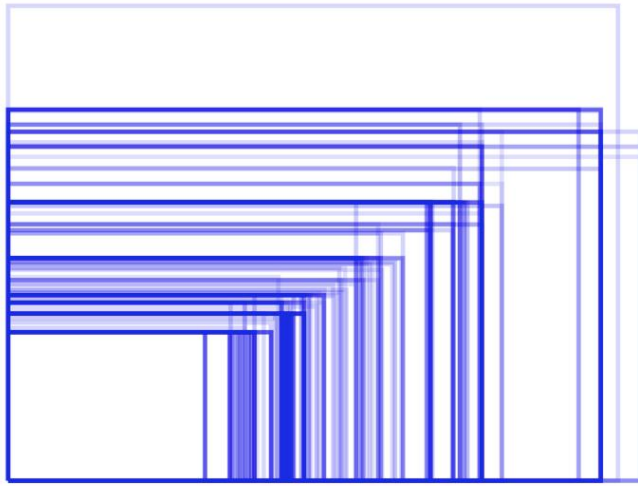
Problema 2: Muchos sistemas OS y versiones



Problema 2: Muchos sistemas OS y versiones

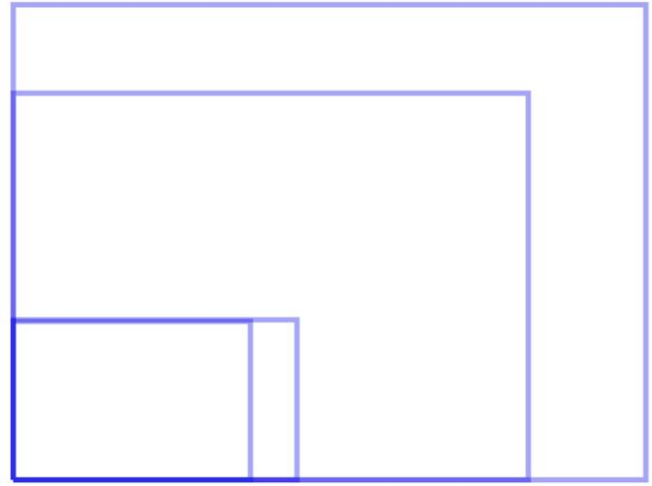


Problema 3: Muchas pantallas



Android

versus



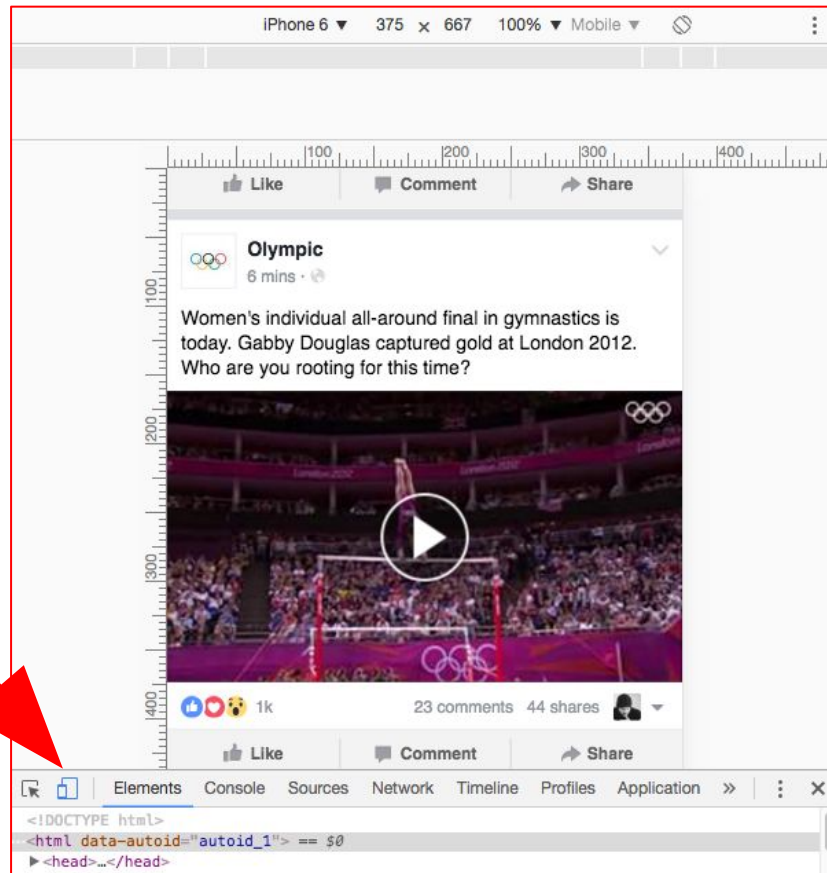
iOS

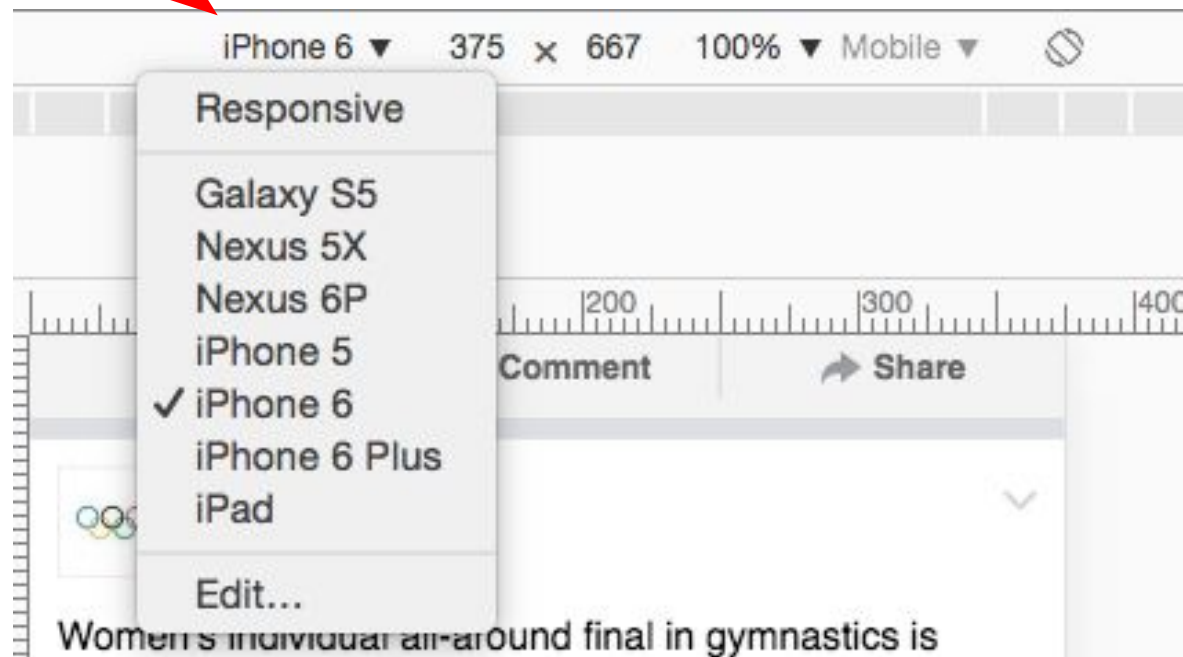
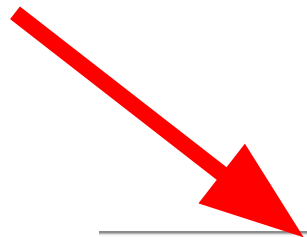
SOLUCIONES



The background features a light gray gradient with several large, colorful circles and dashed lines. In the top left, there is a large teal circle with a white center, a smaller teal circle, and a dashed teal circle. In the top right, there is a large lime green circle, a smaller green circle, and a dashed green circle. In the bottom left, there is a large green circle with a white center, a smaller yellow circle, and a dashed yellow circle. In the bottom right, there is a large yellow circle, a smaller orange circle, and a dashed yellow circle. A large, faint dashed line curves across the background, passing behind the text.

Dev tools





Tag para Responsive

El tag **<meta> viewport** da al browser instrucciones de cómo se debe dimensionar y escalar la página web al cargarse.

```
<meta  
  name="viewport"  
  content="width=device-width, initial-scale=1"  
>
```

Esta es la estructura básica de este tag, en ocasiones puede que lo veamos con más información.

Sin viewport



Con viewport



Unidades de medida relativas



Medidas que están relacionadas con su padre contenedor directo.

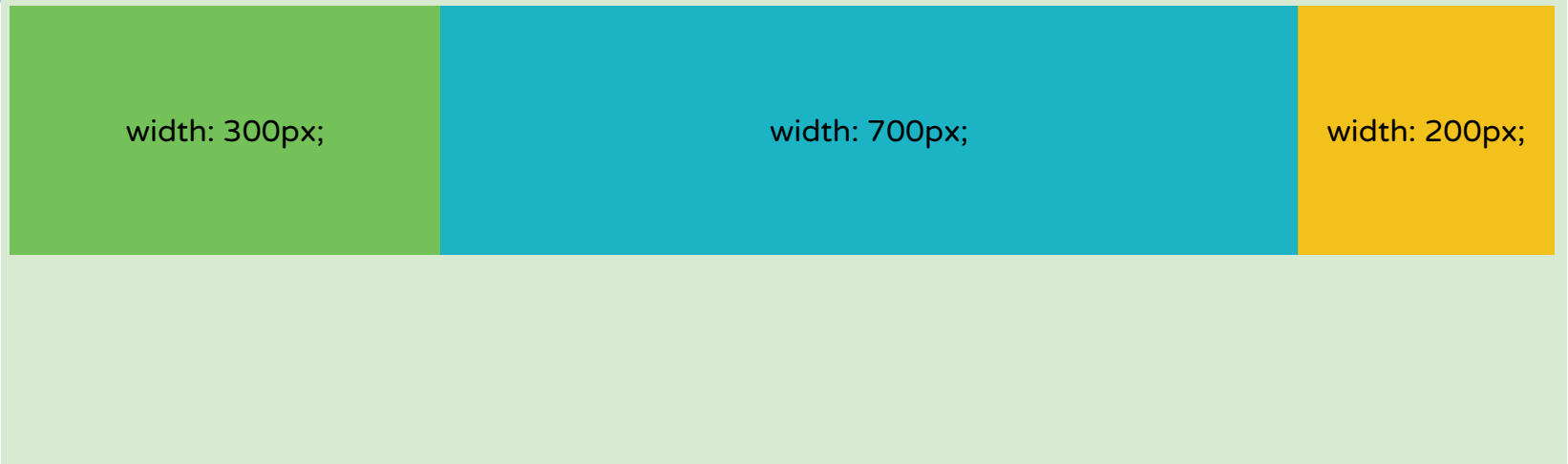


Los Porcentajes – %

Cualquier medida expresada en porcentaje, **SIEMPRE** estará relacionada con la medida (en ese mismo eje) del **elemento padre** que la contiene.

```
.box{  
  width: 25%;  
}
```

- Los altos no se trabajan en medidas porcentuales.

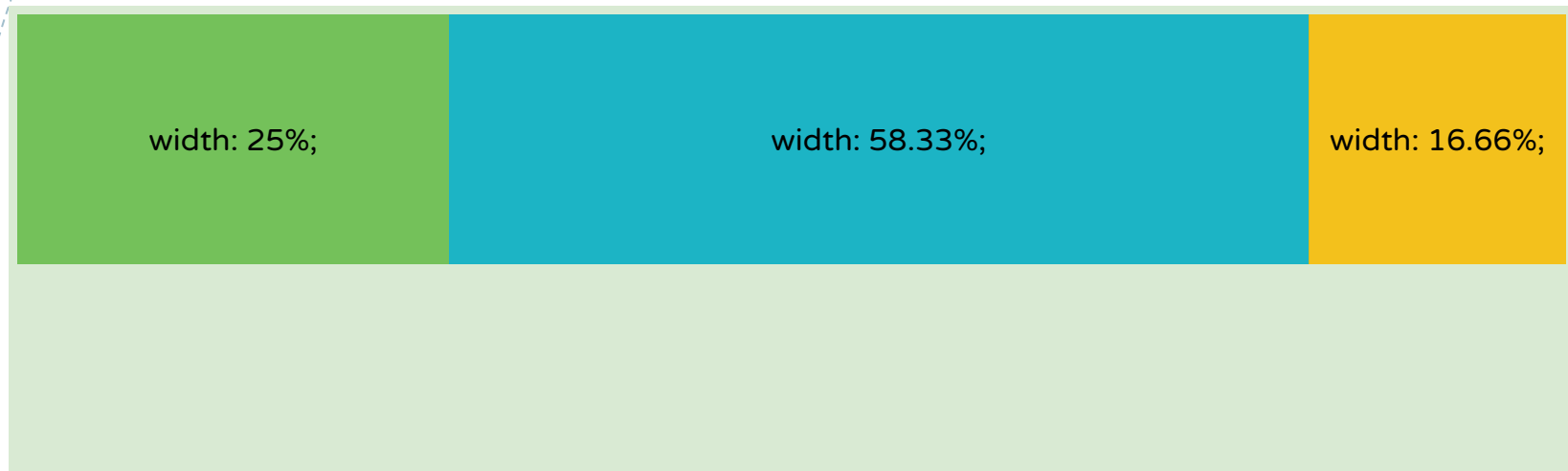


width: 300px;

width: 700px;

width: 200px;

contenedor padre con **1200px** en width



contenedor padre con **1200px** en **max-width**

REGLA DE 3 SIMPLE

width: 25%;
 $(300/1200)*100$

width: 58.33%;
 $(700/1200)*100$

width: 16.66%;
 $(200/1200)*100$

En este caso nuestra “base” es **1200px**

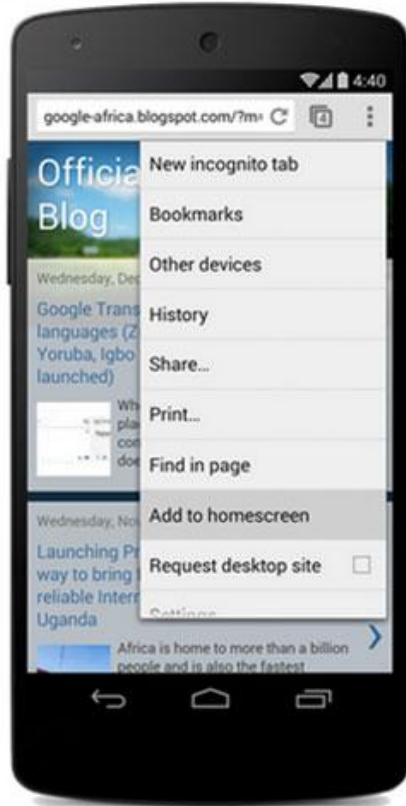
Viewport Measures – vw / vh

Cualquier medida expresada en **vw/vh** tomará **SIEMPRE** como eje referencial **al viewport** del documento.

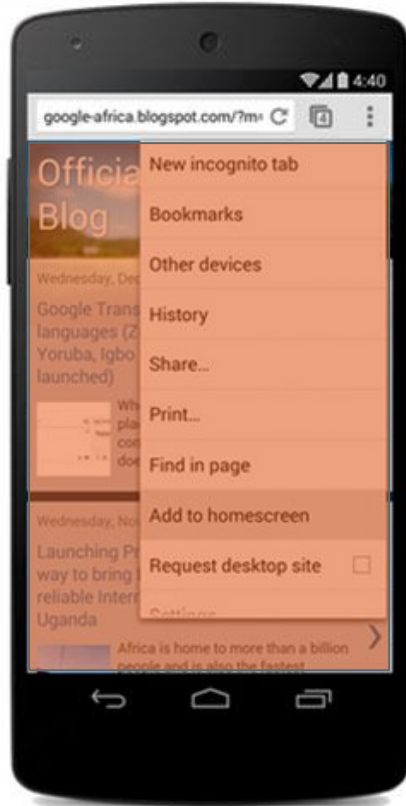
```
.box{  
  width: 25vw;  
  height: 50vh;  
}
```

- **Viewport** hace referencia a la “caja visible” de contenido dentro de un navegador.

El Viewport



El Viewport





A diagram showing a large gray rectangle representing a viewport. Inside the top-left corner of the gray rectangle is a smaller blue rectangle. The blue rectangle contains the text 'width: 30vw; height: 50vh;'. To the right of the gray rectangle, the text 'viewport height de 450px' is written vertically. Below the gray rectangle, the text 'viewport width de 320px' is written horizontally. The entire diagram is framed by a dashed light blue circle, with various colored circles (blue, green, yellow, orange, pink) scattered around the perimeter.

width: 30vw;
height: 50vh;

viewport height de 450px

viewport width de 320px

En este caso, la caja tendrá 0.3 veces el tamaño de ancho del viewport (**96px**) y 0.5 veces el alto del viewport (**225px**)



A diagram illustrating the use of viewport units in CSS. It features a large gray rectangle representing the viewport. Inside the top-left corner of this rectangle is a smaller teal rectangle. The teal rectangle contains the text 'width: 30vw; height: 50vh;'. To the right of the gray rectangle, the text 'viewport height de 250px' is written vertically in red. Below the gray rectangle, the text 'viewport width de 660px' is written horizontally in red. At the bottom left, there is a paragraph of text in Spanish explaining the relationship between the box size and the viewport dimensions.

width: 30vw;
height: 50vh;

viewport height de 250px

viewport width de 660px

En este caso, la caja tendrá 0.3 veces el tamaño de ancho del viewport (**198px**) y 0.5 veces el alto del viewport (**125px**)



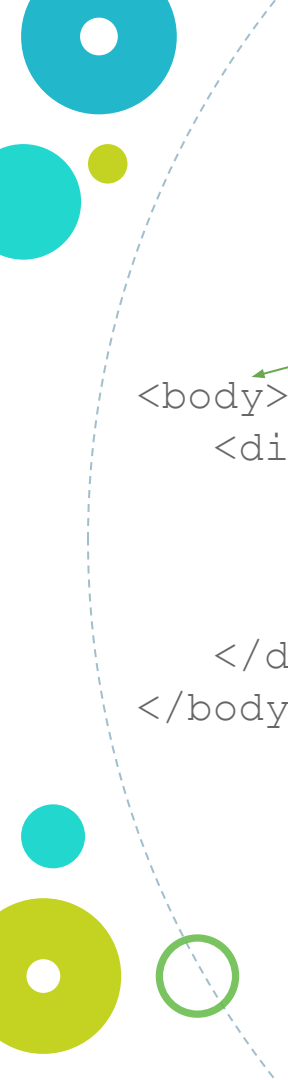
Los em's – em

Los em's son **unidades** de medida que se **recomiendan usar** en todo lo relacionado con **tipografías**.

1em comenzará siendo igual a 16px (a menos que seteemos lo contrario)

```
p{  
  font-size: 1em;  
  line-height: 1.5em;  
}
```

- Toda medida (que no sea el font-size) expresada en em's tomará **SIEMPRE** como base referencial el **font-size** que tenga el mismo elemento que estemos modificando.



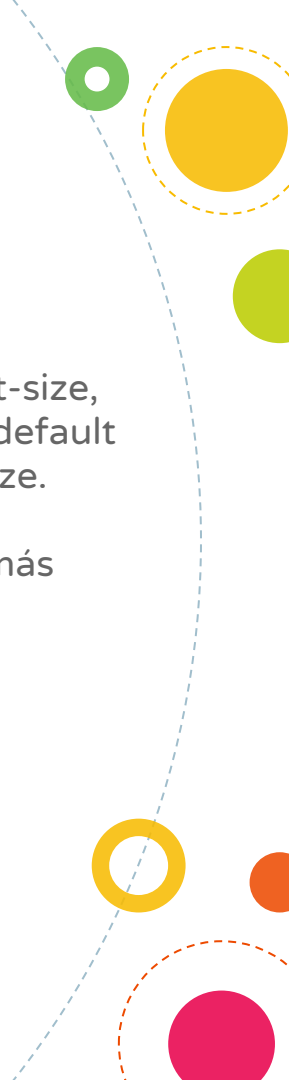
```
<body>
  <div>
    <p>
      <strong><strong>
    </p>
  </div>
</body>
```

Diagram illustrating font-size inheritance in HTML. Green arrows point from the text to the corresponding HTML tags:

- `font-size: 16px;` points to `<body>`
- `font-size: 1em;` points to `<div>`
- `font-size: 1em;` points to `<p>`
- `font-size: 1em;` points to ``

`<body>` tiene 16px en font-size, los demás elementos por default vienen con 1em en font-size.

Por lo tanto, todos los demás elementos tienen 16px de font-size.



```
<body>  
  <div>  
    <p>  
      <strong><strong>  
    </p>  
  </div>  
</body>
```

font-size: 16px;

font-size: 2em;

font-size: 1em;

font-size: 1em;

Si cambiamos el font-size de `<div>` a 2em, éste tendrá 2 veces el tamaño del font-size de su padre.

`<div>` ahora tiene 32px de font-size.

Por lo tanto los hijos de `<div>` ahora cambiaron con solo haber tocado a su padre.

Los hijos de `<div>` quedaron con 32px en font-size.

```
<body>  
  <div>  
    <p>  
      <strong><strong>  
    </p>  
  </div>  
</body>
```

font-size: 16px;
font-size: 2em;
font-size: 1.5em;
font-size: 1em;

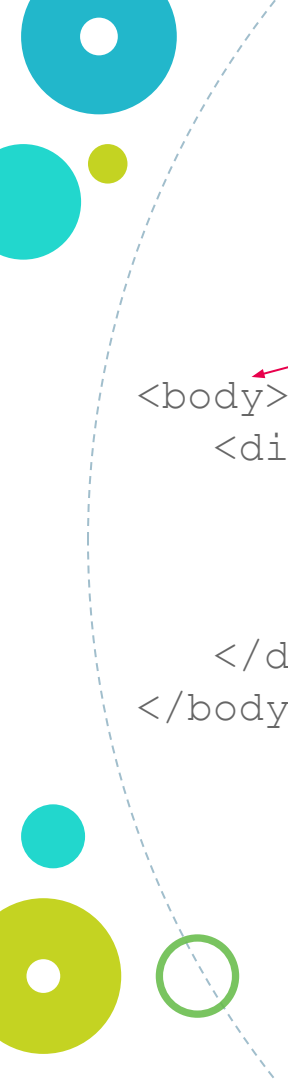
<div> tiene 32px de font-size.

Si a <p> le decimos font-size: 1.5em, <p> tendrá 1.5 veces el tamaño que tenga el font-size de su padre.

<p> ahora tiene 48px en font-size.

 tiene 1 vez lo que tiene su padre en font-size.

 tiene 48px en font-size.



```
<body>
  <div>
    <p>
      <strong><strong>
    </p>
  </div>
</body>
```

font-size: 10px;

font-size: 2em;

font-size: 1.5em;

font-size: 1em;

Si ahora cambiamos la base del documento (<body>) y la llevamos a 10px en font-size. Todos los elementos cambian de tamaño sin haber "tocado" su font-size.

<div> = 20px de font-size

<p> = 30px de font-size

 = 30px de font-size





Practiquemos

Realizar el punto #1 y #2 de la guía de ejercicios.

A decorative graphic on the left side of the slide. It features several overlapping circles in teal, magenta, yellow, and lime green. A large orange magnifying glass is positioned over a snippet of CSS code. The code is color-coded and includes media queries and background rules for HTML and body elements.

Los Media Queries

Conjunto de reglas CSS que permiten re-organizar el contenido dependiendo de las condiciones de visualización del documento.

Siempre se deben escribir al final de nuestra hoja de CSS.



Media-query

```
body { background: red; }
```

```
@media (min-width: 460px){  
  body { background: blue; }  
}
```

Al especificar **min-width**, estamos diciendo “si como mínimo hay Npx de ancho, apliquemos esto” algo como “desde este punto hacia arriba”.



Media-query

```
body { background: red; }
```

```
@media (max-width: 460px){  
  body { background: blue; }  
}
```

Al especificar **max-width**, estamos diciendo “si como máximo hay Npx de ancho, apliquemos esto” algo como “desde este punto hacia abajo”.



Media-query definiendo la **orientación**

```
@media (max-width: 768px) and (orientation: portrait){  
    ...  
}
```

Al especificar **la orientación (portrait o landscape)**, estamos diciendo “si como máximo hay Npx de ancho y además el dispositivo está en posición vertical/horizontal, apliquemos esto”.

Combinando Media Queries

```
@media (max-width: 600px) { ...
```

```
@media (min-width: 700px) { ...
```

```
@media (min-width: 700px) and (max-width: 600px) { ...
```

```
@media (min-width: 700px) and (max-width: 600px) {
```

The background is white with several colorful geometric shapes. In the top left, there is a large teal circle with a white center, a smaller solid teal circle, and a dashed teal circle. In the top right, there is a large lime green circle, a smaller solid green circle, and a dashed green circle. In the bottom left, there is a large green circle with a white center, a smaller solid orange circle, and a dashed yellow circle. In the bottom right, there is a large yellow circle, a smaller solid orange circle, and a small solid pink circle. A large, faint dashed blue circle spans across the middle of the slide.

Estrategias

Mobile-first o Mobile-last



Mobile last

```
// Estilos para desktop
body {
    background-color: red;
    ...
}

// y luego pensar cada se adapta en cada viewport

@media only screen and (max-width: 768px) {
    ... // tablets
}

@media only screen and (max-width: 420px) {
    ... // mobile
}
```

The background of the slide is decorated with several overlapping circles and rings in various colors including teal, orange, yellow, pink, green, and blue. Some of these shapes have dashed outlines.

Mobile first

```
// Estilos para mobile
body {
  background-color: red;
  ...
}
```

```
// y luego pensar cada se adapta en cada viewport
@media only screen and (min-width: 600px) {
  ... // tablets
}

@media only screen and (min-width: 768px) {
  ... // desktop
}
```

The background is white with a decorative arrangement of colorful circles and a dashed line. In the top-left corner, there is a large cyan circle with a white center, a smaller solid cyan circle to its right, and a dashed cyan circle to its left. In the top-right corner, there is a large lime green circle, a smaller solid green circle to its right, and a dashed green circle to its right. In the bottom-left corner, there is a large green circle with a white center, a smaller solid orange circle to its right, and a dashed yellow circle to its left. In the bottom-right corner, there is a large yellow circle, a smaller solid orange circle to its right, and a small solid pink circle above it. A dashed grey line starts from the top-left, curves around the central text, and ends at the bottom-right.

¿Estándares?

1200px

/* Large Devices, Wide Screens */

@media only screen and (max-width : 1200px) { ...

992px

/* Medium Devices, Desktops */

@media only screen and (max-width : 992px) { ...

768px

/* Small Devices, Tablets */

@media only screen and (max-width : 768px) { ...

480px

/* Extra Small Devices, Phones Landscape */

@media only screen and (max-width : 480px) { ...

320px

/* Extra Small Devices, Phones Portrait */

@media only screen and (max-width : 320px) { ...

Mobile last

320px

```
/* Extra Small Devices, Phones Portrait */  
@media only screen and (min-width : 320px) { ...
```

480px

```
/* Extra Small Devices, Phones Landscape */  
@media only screen and (min-width : 480px) { ...
```

768px

```
/* Small Devices, Tablets */  
@media only screen and (min-width : 768px) { ...
```

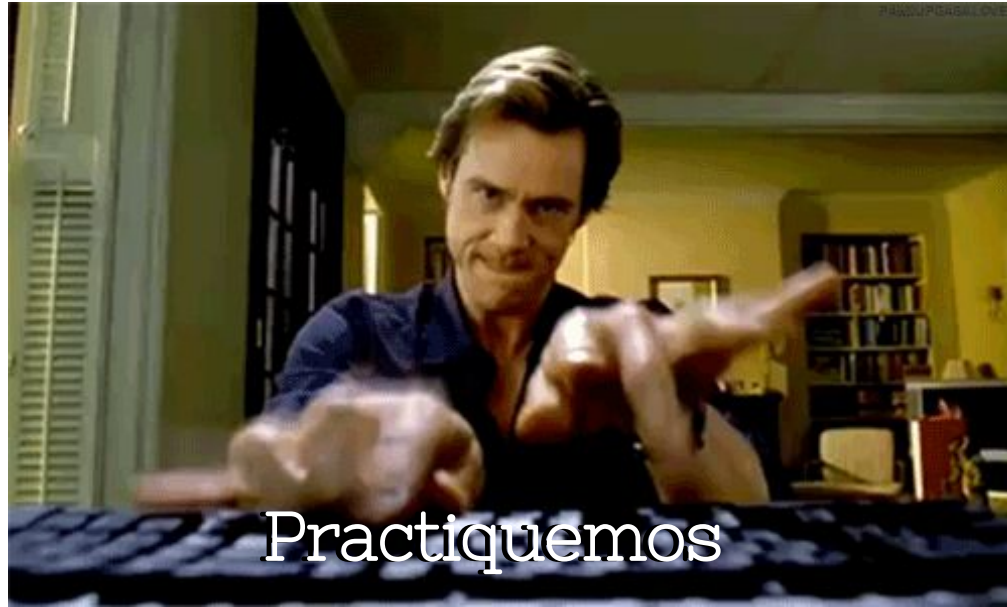
992px

```
/* Medium Devices, Desktops */  
@media only screen and (min-width : 992px) { ...
```

1200px

```
/* Large Devices, Wide Screens */  
@media only screen and (min-width : 1200px) { ...
```

Mobile first



Realizar el punto #3 de la guía de ejercicios.