



♪ Music playing ♪



♪ Music playing ♪

Branch: master ▾

New pull request

Create new file

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Marcy Sutton version 0.0.1

Latest commit b309f1c 6 days ago

README.md

version 0.0.1

6 days ago

index.js

version 0.0.1

6 days ago

package-lock.json

version 0.0.1

6 days ago

package.json

version 0.0.1

6 days ago

README.md

# No Mouse Days

Ever wanted a package that disables the mouse cursor one day a week so you can test keyboard accessibility as a team? No? Well here you go anyway.

## How to use

### 1. Install the package

```
npm install no-mouse-days
```

### 2. Import the package into your project for all times

```
import "no-mouse-days"
```

### 3. Import and conditionally apply it in development, if you want

```
if (process.env.NODE_ENV === 'development') {  
  import("no-mouse-days")  
}
```

Branch: master ▾

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1 commit

1 branch

0 packages

0 releases

0 contributors

Branch: master

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No Mouse Days

<https://github.com/marcysutton/no-mouse-days>

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}
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**Why?**

**I Can't See**

**Low Vision AI & Users**



# Chris DeMars

## Front-End Developer

[@saltnburnem](#) on Twitter!

# TUFT & NEEDLE





# That's Me!

- **Google Developer Expert** 
- **Microsoft MVP** 
- **International Speaker** 🌍
- **Founder of Vuetroit**
- **Host of Tales From the Script** 📢
- **♥️ Tattoos & Horror** 👻 🤡 💀 🧛 🧛

# TALES

## FROM THE

# SCRIPT

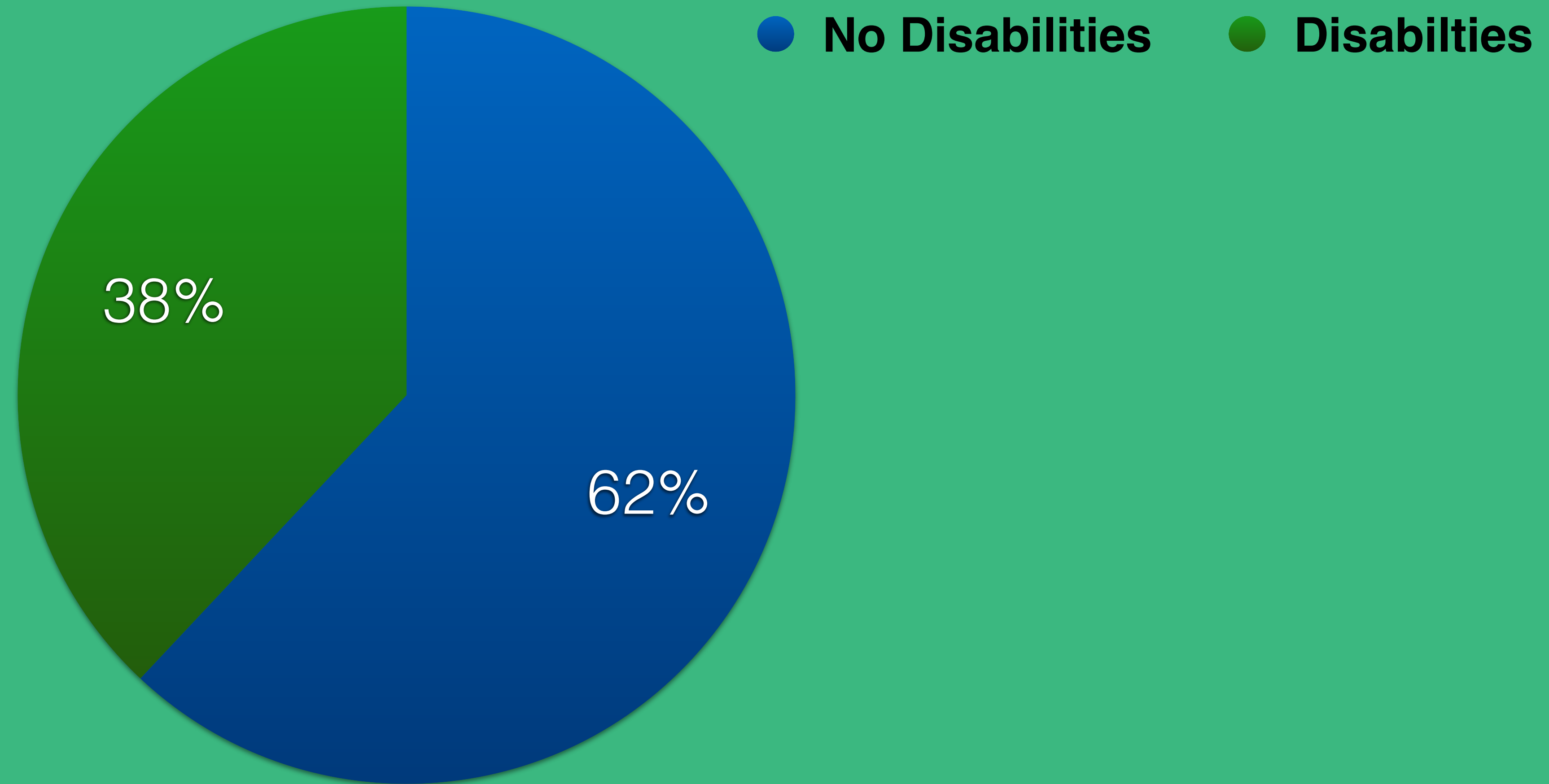
**Twitter:** @TalesFTScript | **Site:** talesftscript.com

```
10 return <n${level}><a name="${escapedText}" href="#${escapedText}">${text}</a></n${level}>
11 }
12
13 module.exports = {
14   webpack: config => {
15     // Add in prefetch conditionally so we don't break jest snapshot testing
16     config.plugins.push(
17       new webpack.DefinePlugin({
18         'process.env.USE_PREFETCH': JSON.stringify(USE_PREFETCH),
19       })
20     )
21
22     // Markdown loader so we can use docs as .md files
23     config.module.rules.push({
24       test: /\.md$/,
```

A pair of dark-rimmed glasses with purple-tinted lenses is resting on an open book. The book's pages are visible, with some text in Polish. The background is dark and out of focus.

**“I can’t see that.”**

# Percentage of people with disabilities.



- <https://www.inclusivecitymaker.com/disabled-people-in-the-world-in-2019-facts-and-figures/>

**A11y**

# Numeronym

A c c e s s i b i l i t y  
A 1 2 3 4 5 6 7 8 9 10 11 y

A11y

**What is a11y?**



**“Web accessibility means that people with disabilities can use the Web.”**

<https://www.w3.org/WAI/intro/accessibility.php>

**Open Web**

**=**

**Inclusive Web**

**=**

**Web for all!**

**“Web accessibility means that  
EVERYONE can use the Web.”**

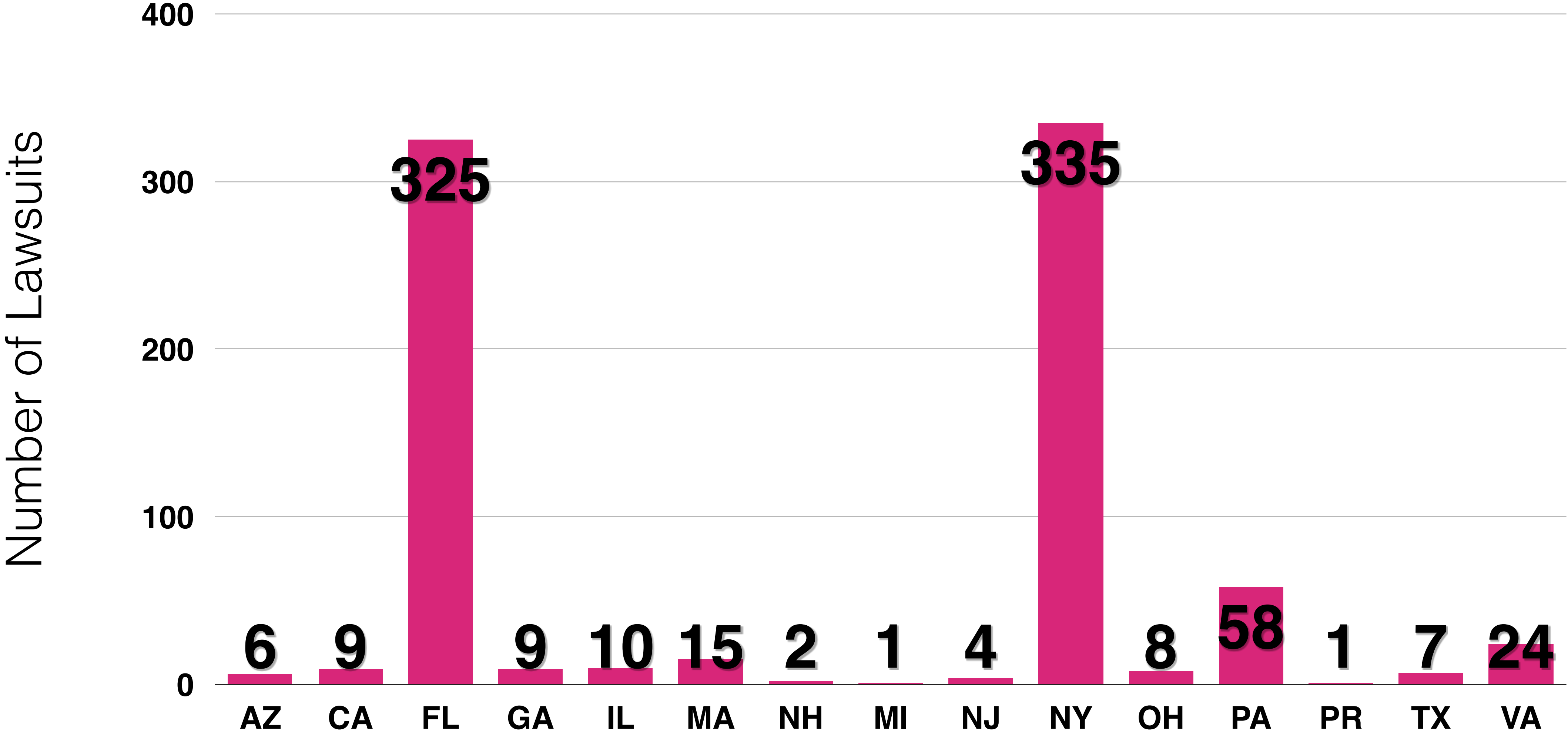
- Me (Chris DeMars)

**“The web is not a barrier to people with disabilities, it is the solution..”**

- <http://webaim.org/articles/pour/>

**“Accessibility is  
NOT a requirement,  
it is a MUST!”**

# Federal Website Accessibility Lawsuits by State in 2017



Total Number of Suits Nationwide: At least **814**

# Types of Disabilities



# Types of Disabilities

**Hearing**





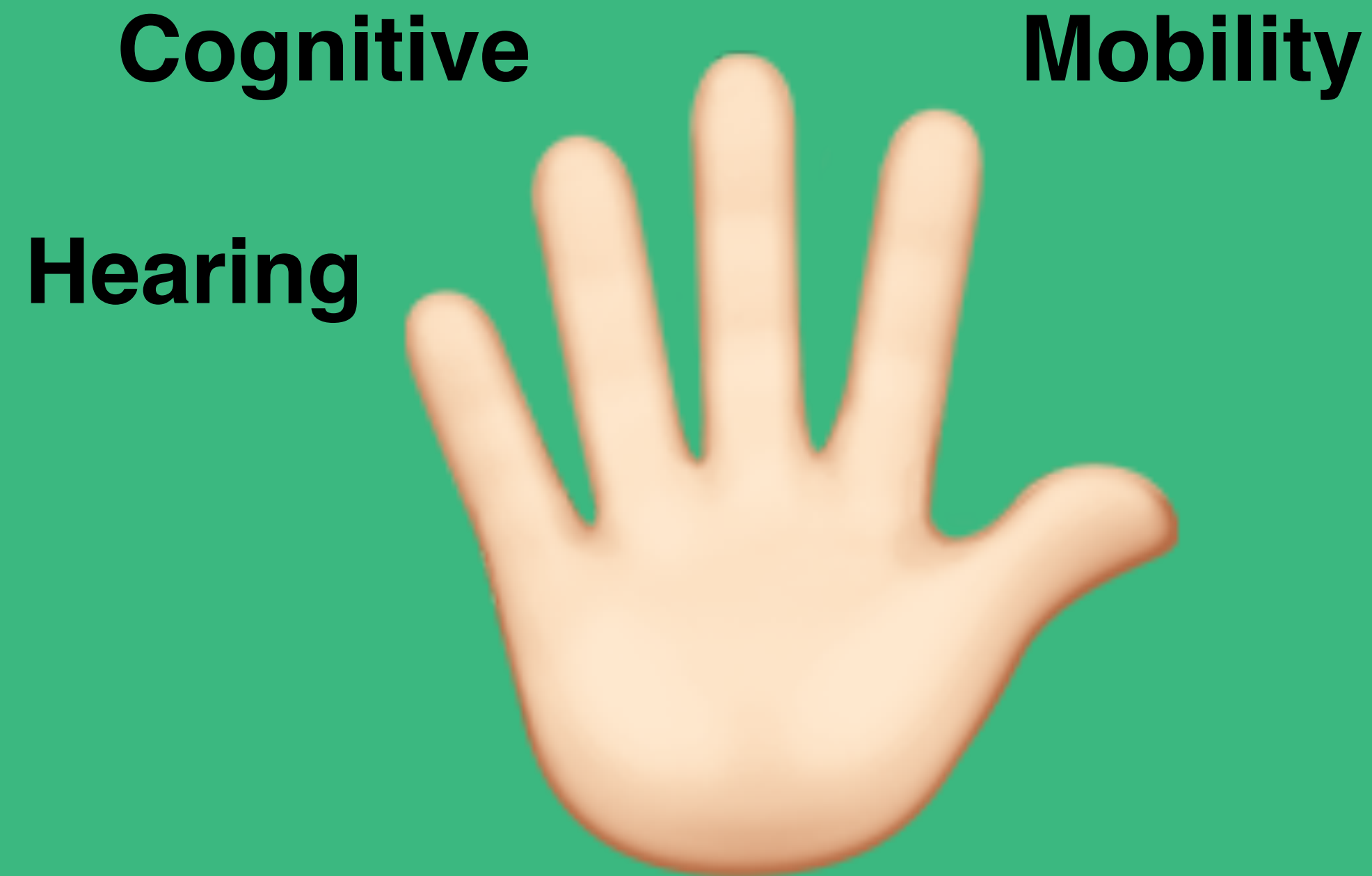
# Types of Disabilities

**Cognitive**

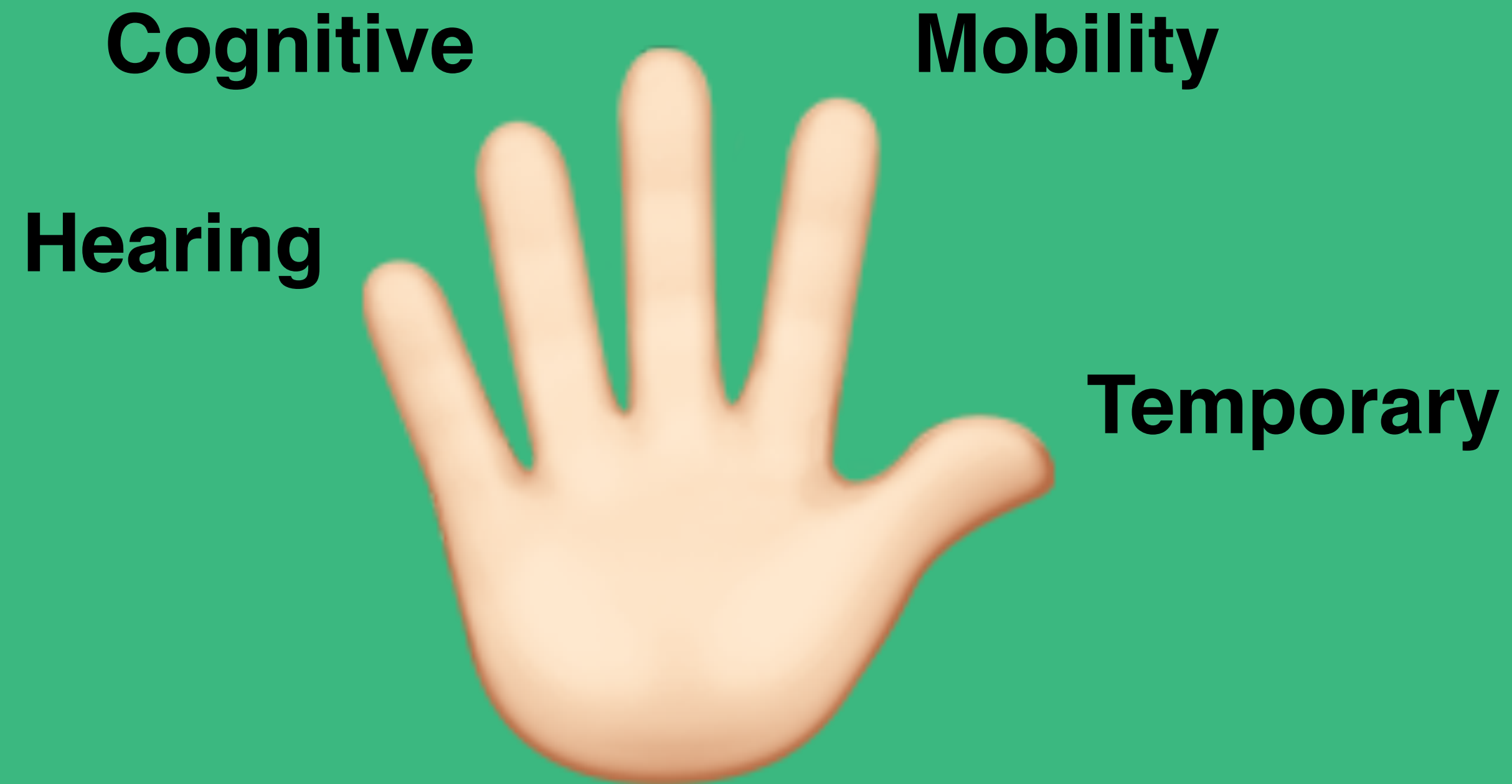
**Hearing**



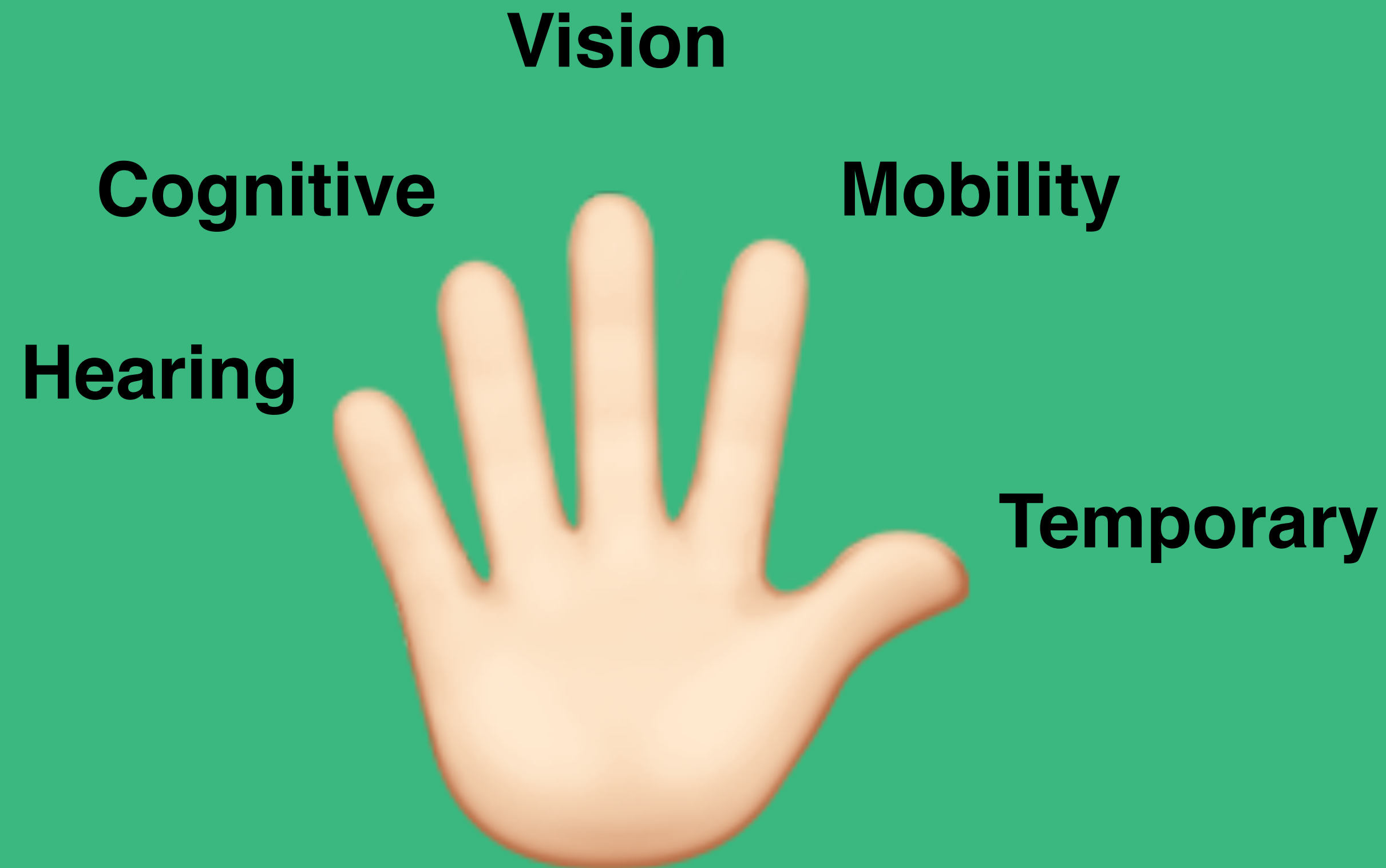
# Types of Disabilities



# Types of Disabilities



# Types of Disabilities



**POUR**

**P  
O  
U  
R**

**P**erceivable

**O**

**U**

**R**

**P**erceivable

**O**perable

**U**

**R**



**P**erceivable

**O**perable

**U**nderstandable

**R**

**P**erceivable

**O**perable

**U**nderstandable

**R**obust

**P** erceivable

**O** perable

**U** nderstandable

**R** obust

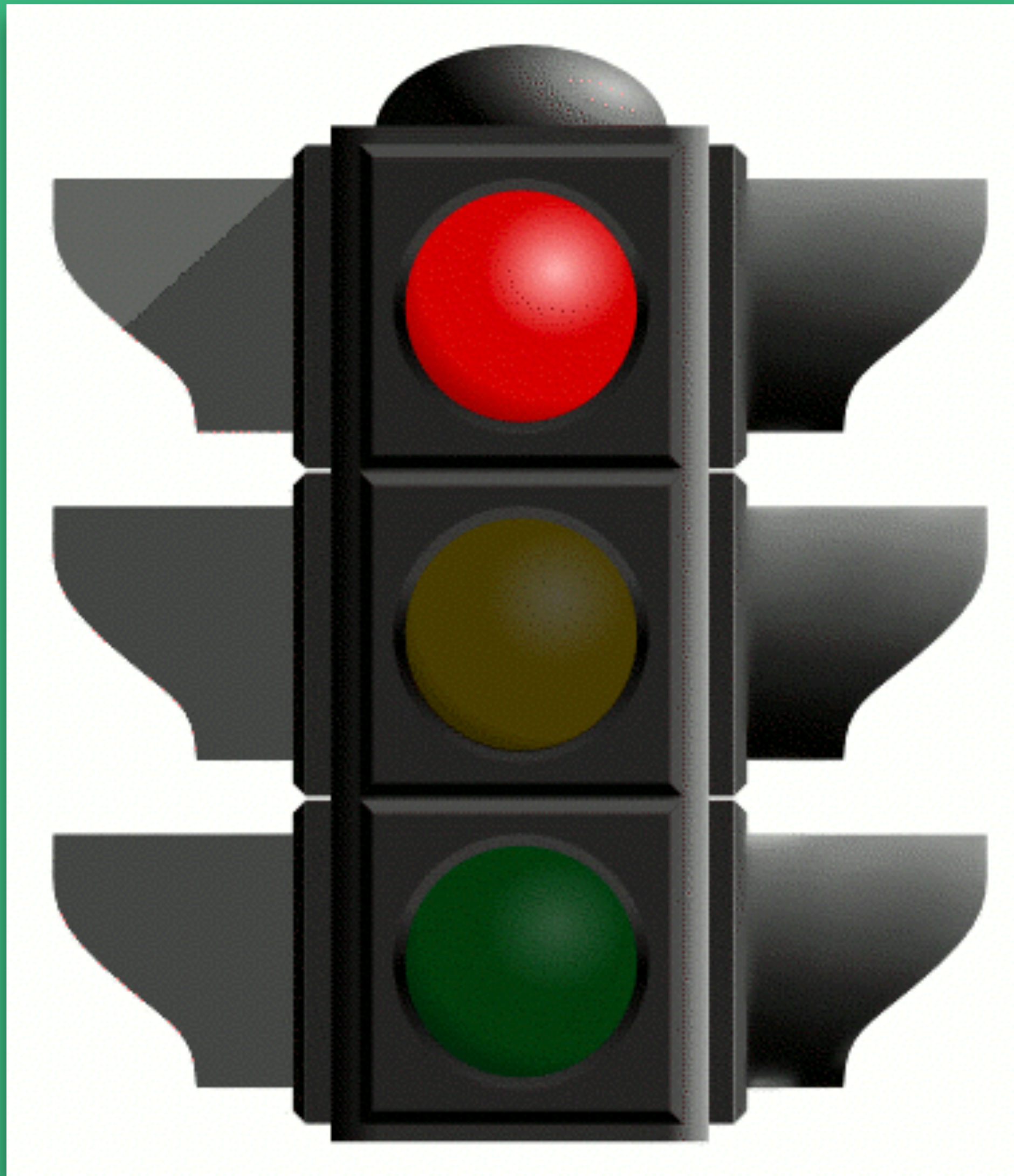
**P**erceivable

**Poor Vision**

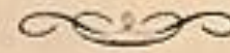


**Low Vision**





## The Raven.



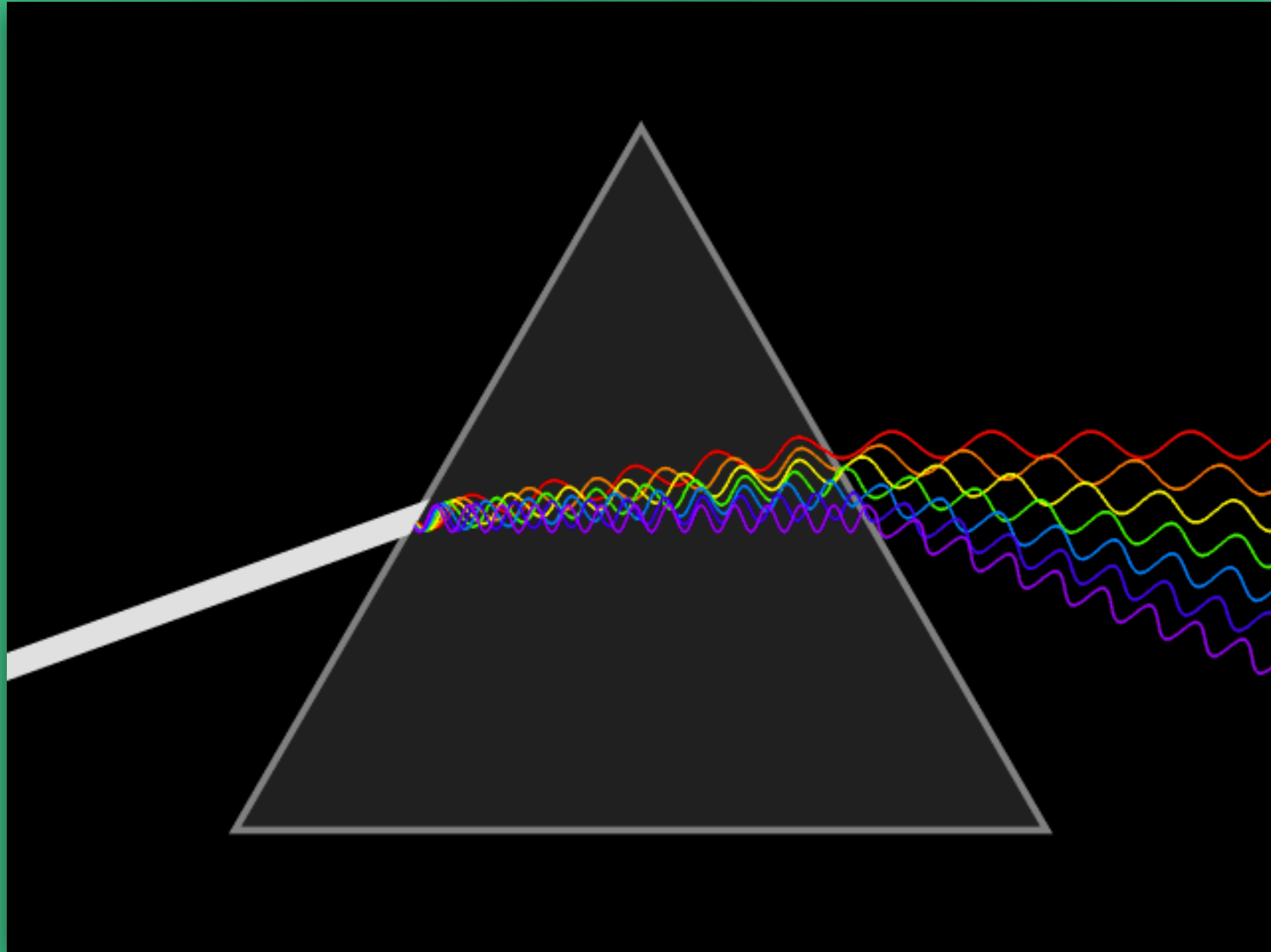
ONCE upon a midnight dreary, while I pondered, weak and weary,  
Over many a quaint and curious volume of forgotten lore—  
While I nodded, nearly napping, suddenly there came a tapping,  
As of some one gently rapping, rapping at my chamber door.  
"Tis some visitor," I muttered, "tapping at my chamber door—  
Only this and nothing more."

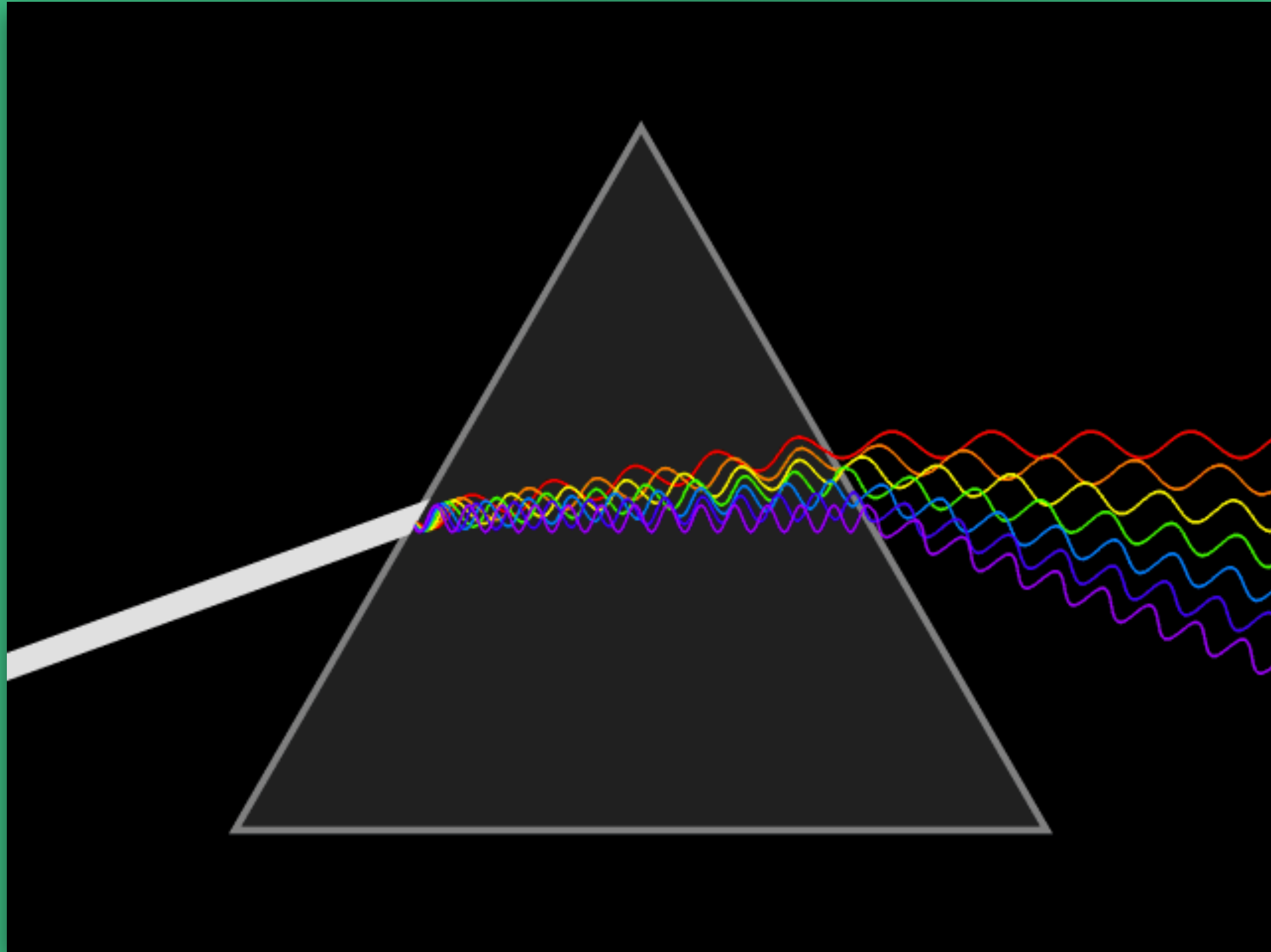
2  
Ah, distinctly I remember, it was in the bleak December,  
And each separate dying ember wrought its ghost upon the floor.  
Eagerly I wished the morrow;—vainly I had sought to borrow  
From my books surcease of sorrow—sorrow for the lost Lenore—  
For the rare and radiant maiden whom the angels name Lenore,—  
Nameless here for evermore.

And the silken sad uncertain rustling of each purple curtain  
Thrilled me—filled me with fantastic terrors never felt before;  
So that now, to still the beating of my heart, I stood repeating,  
"Tis some visitor entreating entrance at my chamber door—  
Some late visitor entreating entrance at my chamber door,—  
This it is and nothing more."









# **Color Blindness Or Color Vision Deficiency**

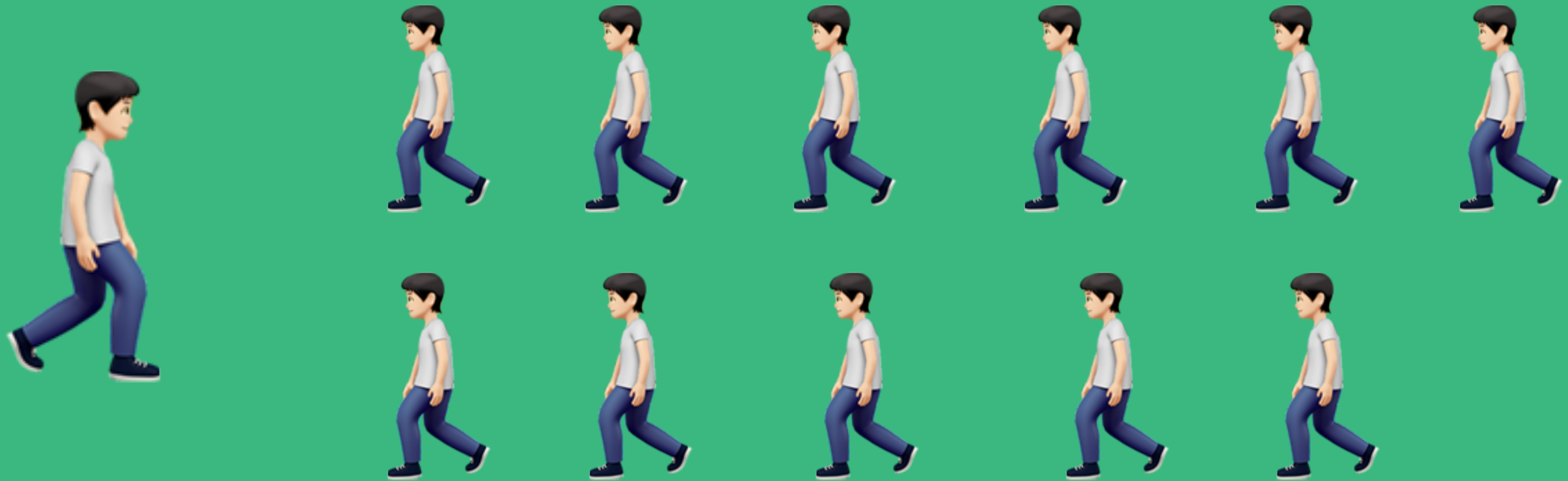
# What is it?

**“Color vision deficiency is the inability to distinguish certain shades of color.”**

- <https://www.aoa.org/>

**How many people are color  
blind?**

# 1 in 12





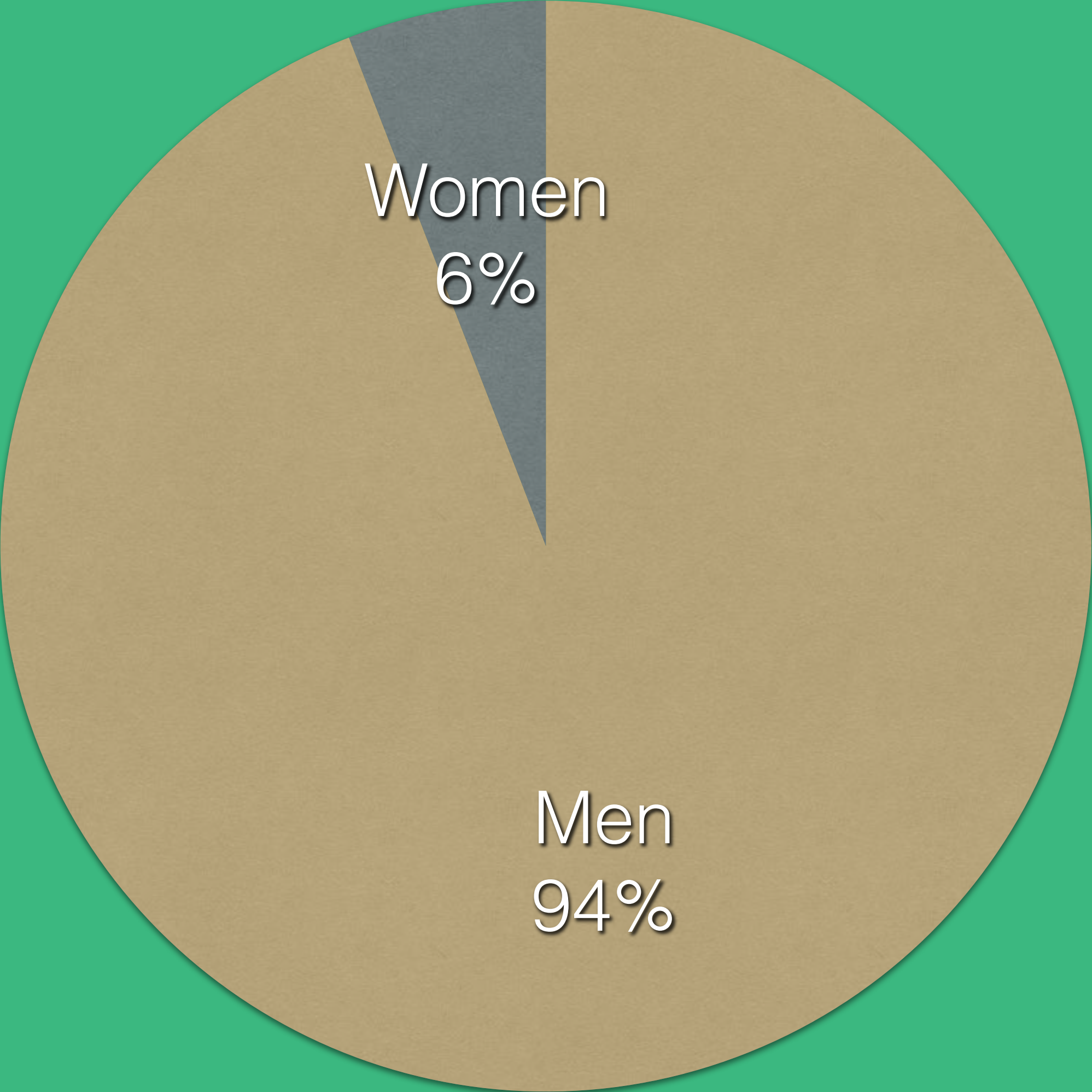
**1 in 200**



**x 200**

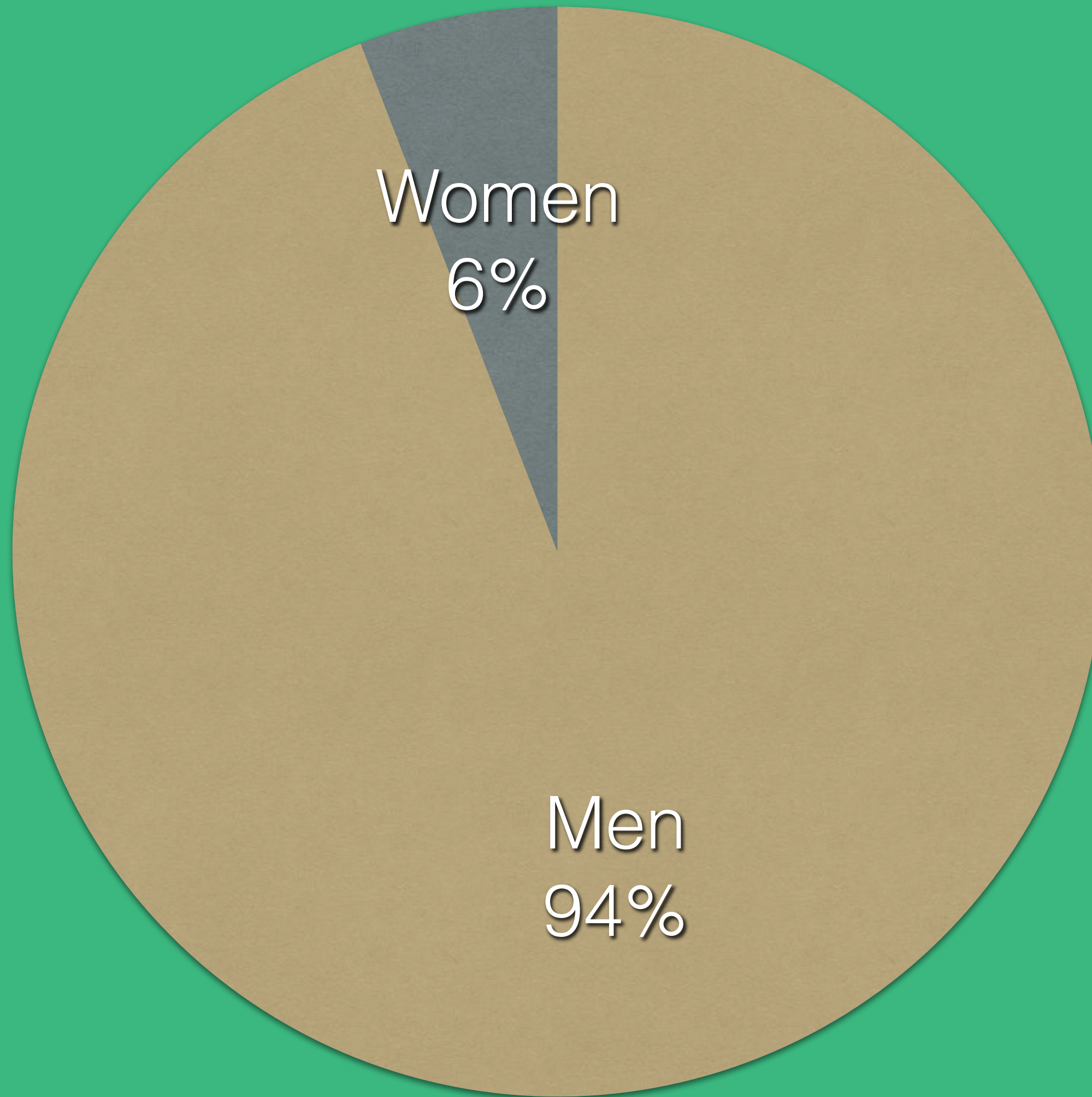
● Men

● Women



● Men

● Women



**The gene is passed down from the mom.**





# Types of color vision deficiencies?

# Types of color vision deficiencies?



Normal

# Types of color vision deficiencies?



**Normal**



**Deuteranopia**



# Types of color vision deficiencies?



**Normal**



**Deuteranopia**



**Protanopia**

# Types of color vision deficiencies?



**Normal**



**Deuteranopia**



**Protanopia**



**Tritanopia**

# Monochromatic

# 1 in 33,000!



# Visual Acuity











# What is it?

<b>E</b>	1	20/200
<b>F P</b>	2	20/100
<b>T O Z</b>	3	20/70
<b>L P E D</b>	4	20/50
<b>P E C F D</b>	5	20/40
<b>E D F C Z P</b>	6	20/30
<b>F E L O P Z D</b>	7	20/25
<b>D E F P O T E C</b>	8	20/20
<b>L E F O D P C T</b>	9	
<b>F D P L T C E O</b>	10	
<b>F E Z O L C F T D</b>	11	

# Types of visual acuity?

# Spatial Acuity



**2 points in spaaaaaace**

# Temporal Acuity



# Distinguish visual elements in time!



# Spectral Acuity



# Spectral Acuity

A man with short brown hair, wearing a grey suit jacket, a white dress shirt, and a patterned bow tie, stands in a laboratory. He is smiling slightly and looking towards the camera. The background is filled with various pieces of scientific equipment, including a large black spherical flask hanging from a metal stand, a green gas cylinder, and other complex apparatus. The scene is brightly lit, typical of a laboratory environment.

**Acuity is SCIENCE**



Line - 120 ml.  
Gauge - 18 ml.  
low gauge - 25% vol.

# Contrast Sensitivity

# What is good color contrast?

**WCAG 2.1 says 4.5:1**

## Low Contrast

**Example** ← **1.79:1**

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Nesciunt, autem eveniet ipsa est! Ex libero sequi labore quam saepe, obcaecati, doloribus. Eveniet hic ratione maiores consequatur possimus ea vitae nam.

**Example** ← **1.79:1**

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Ducimus voluptas doloribus quam adipisci nemo culpa, obcaecati temporibus voluptate inventore molestias totam blanditiis, esse pariatur beatae quasi excepturi nulla, ipsam ratione!





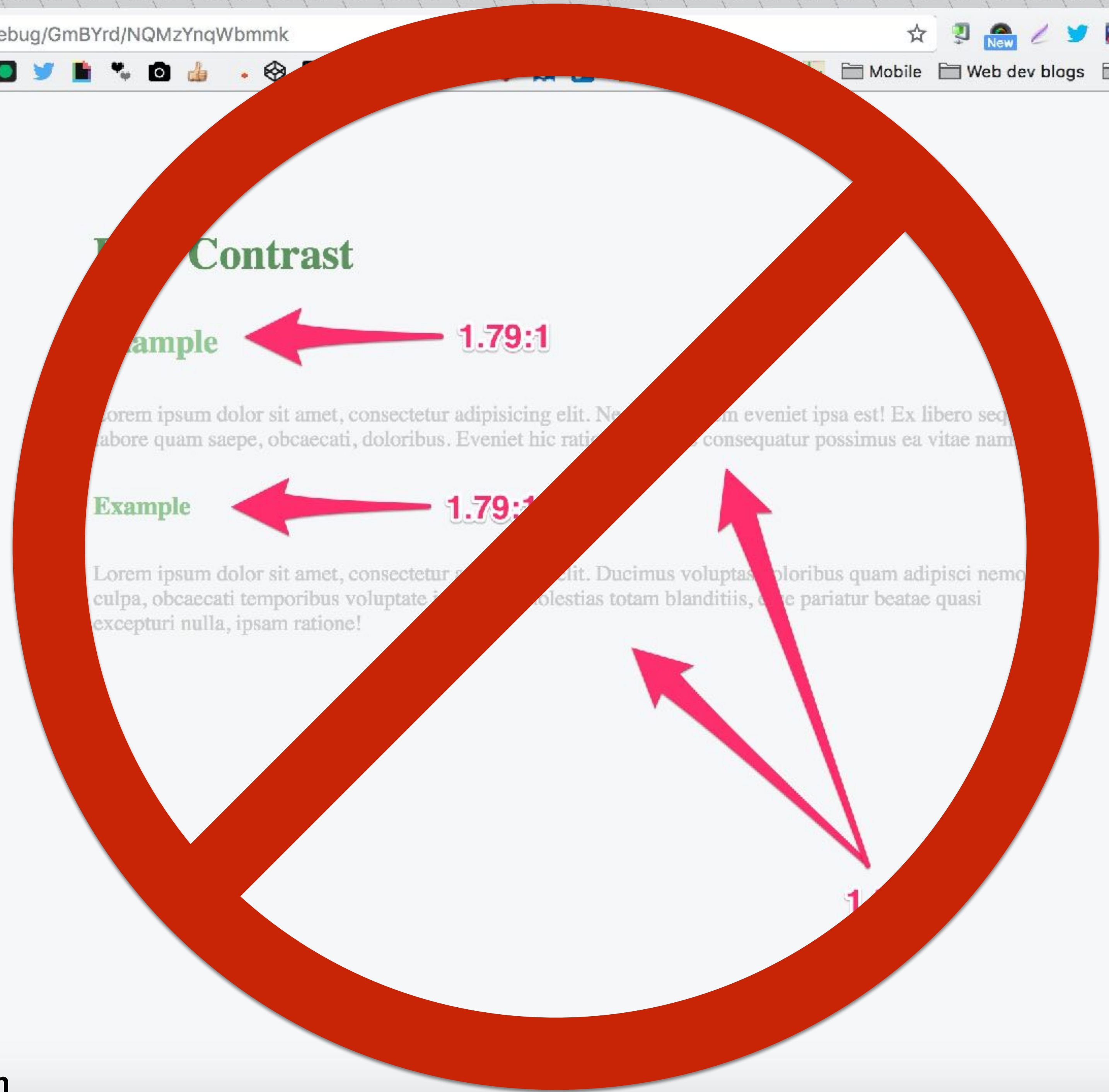
## Contrast

Example ← 1.79:1

>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Neque enim eveniet ipsa est! Ex libero sequi  
labore quam saepe, obcaecati, doloribus. Eveniet hic ratione, consequatur possimus ea vitae nam

Example ← 1.79:1

>Lorem ipsum dolor sit amet, consectetur adipisicing elit. Ducimus voluptas doloribus quam adipisci nemo  
culpa, obcaecati temporibus voluptate in molestias totam blanditiis, esse pariatur beatae quasi  
excepturi nulla, ipsam ratione!



**High Contrast** ← **9.91:1**

**Example** ← **19.56:1**

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Nesciunt, autem eveniet ipsa est! Ex libero sequi labore quam saepe, obcaecati, doloribus. Eveniet hic ratione maiores consequatur possimus ea vitae nam.

**Example** ← **19.56:1**

Lorem ipsum dolor sit amet, consectetur adipisicing elit. Ducimus voluptas doloribus quam adipisci nemo culpa, obcaecati temporibus voluptate inventore molestias totam blanditiis, esse pariatur beatae quasi excepturi nulla, ipsam ratione!

**12.94:1**

# High Contrast

9.91:1

## Example

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed ut perspiciatis unde omnis iste natus error sit voluptatem accusantium, autem eveniet ipsa est! Ex libero se... labore quam saepe, obcaecati, doloribus. E... maiores consequatur possimus ea vitae nam.

## Example

Lorem ipsum dol... culpa, obcaecati... excepturi nulla, ... am adipisci nemo... tur beatae quasi

2.94:1

# The Problem

# Contrasting Colors

## Contrast Tools

Foreground color:

808284



[lighter](#) | [darker](#)

Background color:

ffffff



[lighter](#) | [darker](#)

Contrast Ratio: **3.86:1**

Normal Text: **Sample**

AA: **Fail**

AAA: **Fail**

Large Text: **Sample**

AA: **Pass**

AAA: **Fail**

Billing & Payment

Service & Rates

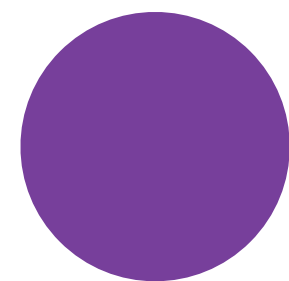
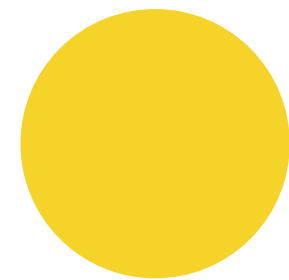
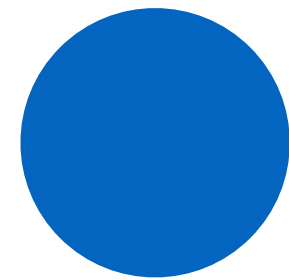
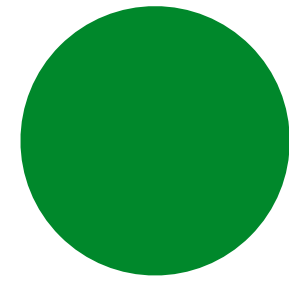
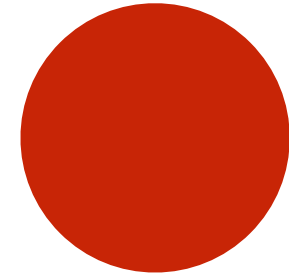
Outage & Safety

Save Energy

Community & News

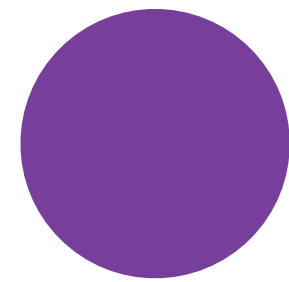
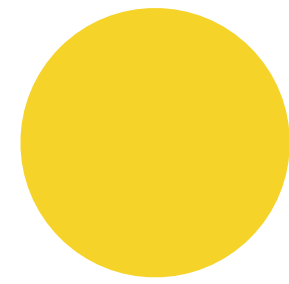
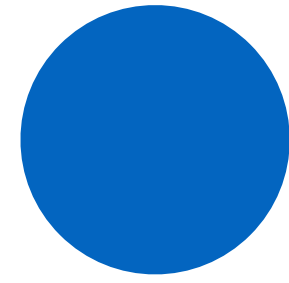
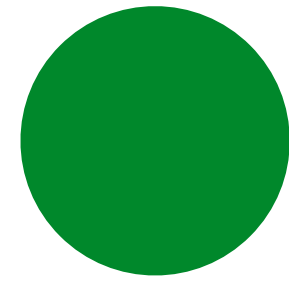
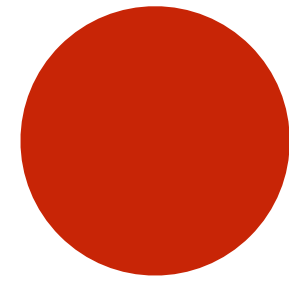
# Communication Through Colors

# My Awesome Legend





# My Awesome Legend



**Waiting**

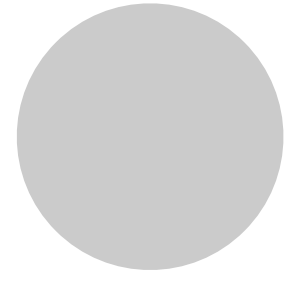
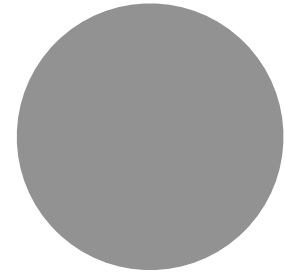
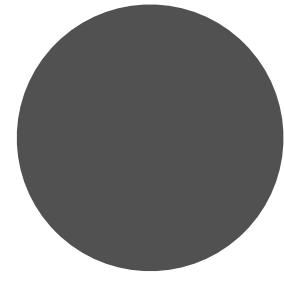
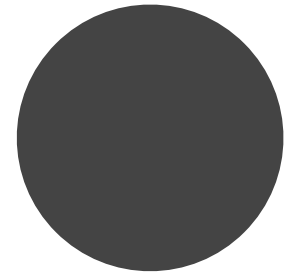
**Pushed**

**In Progress**

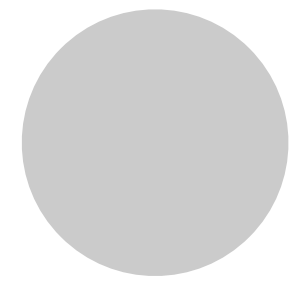
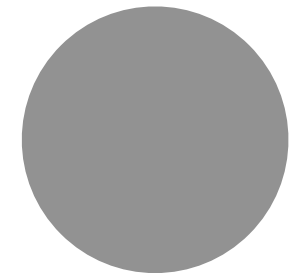
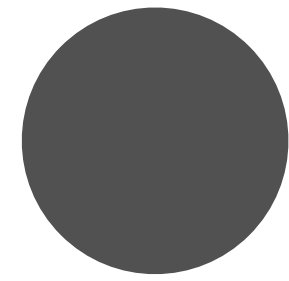
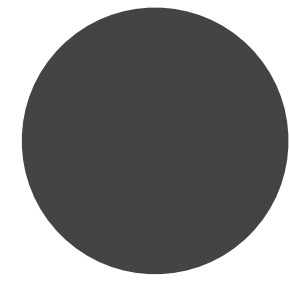
**Denied**

**Passed**

# My Awesome Legend



# My Awesome Legend



**Waiting**

**Pushed**

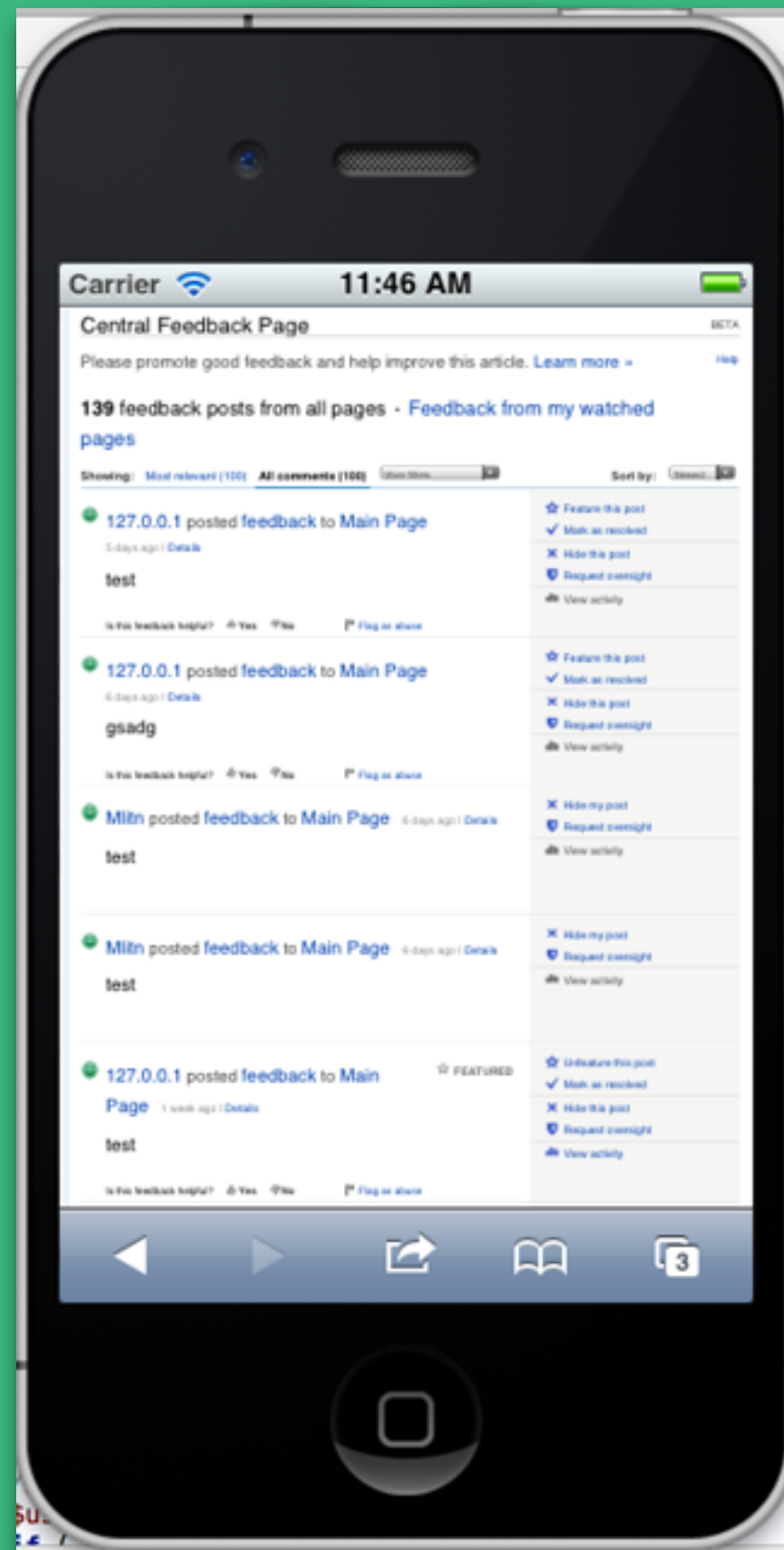
**In Progress**

**Denied**

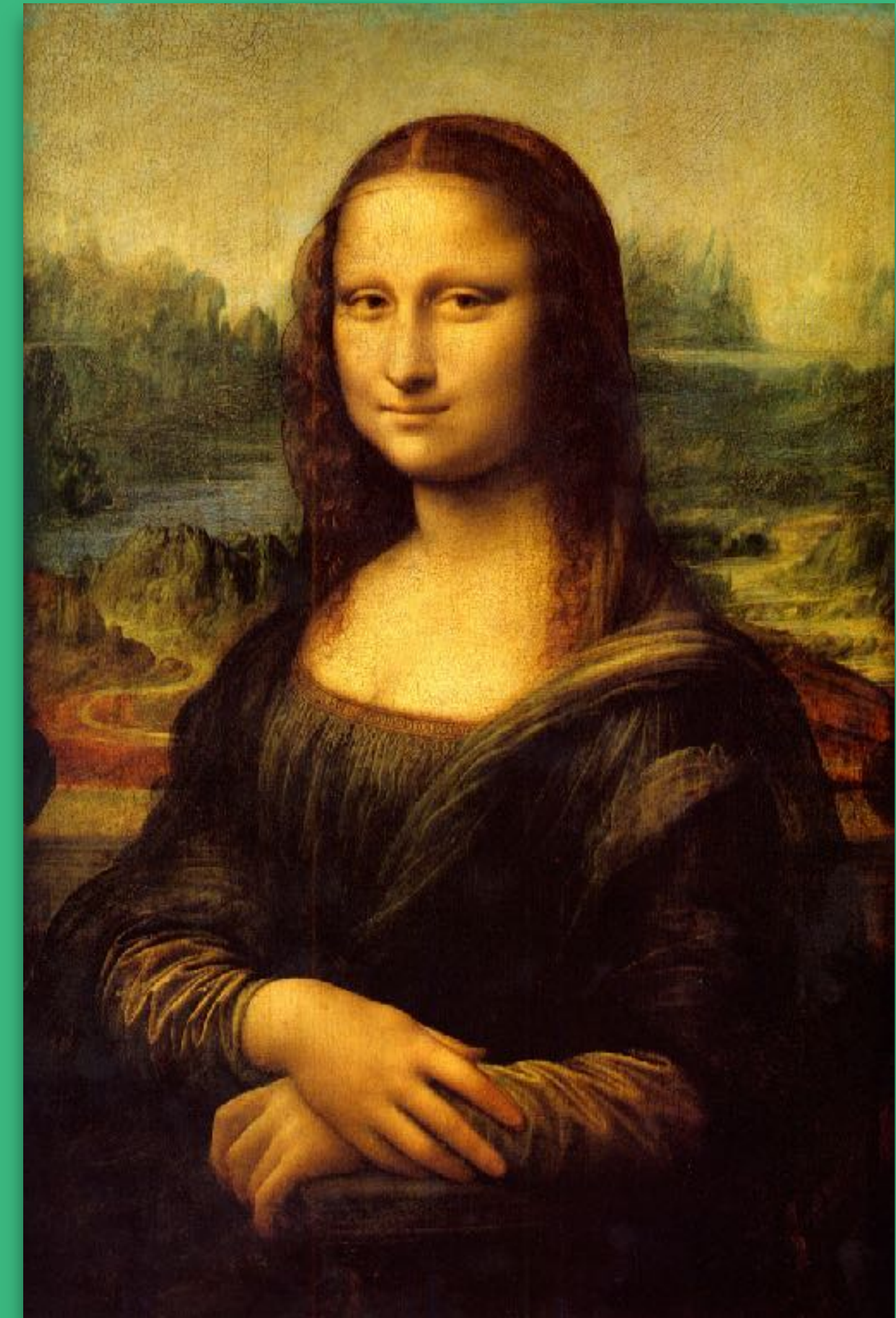
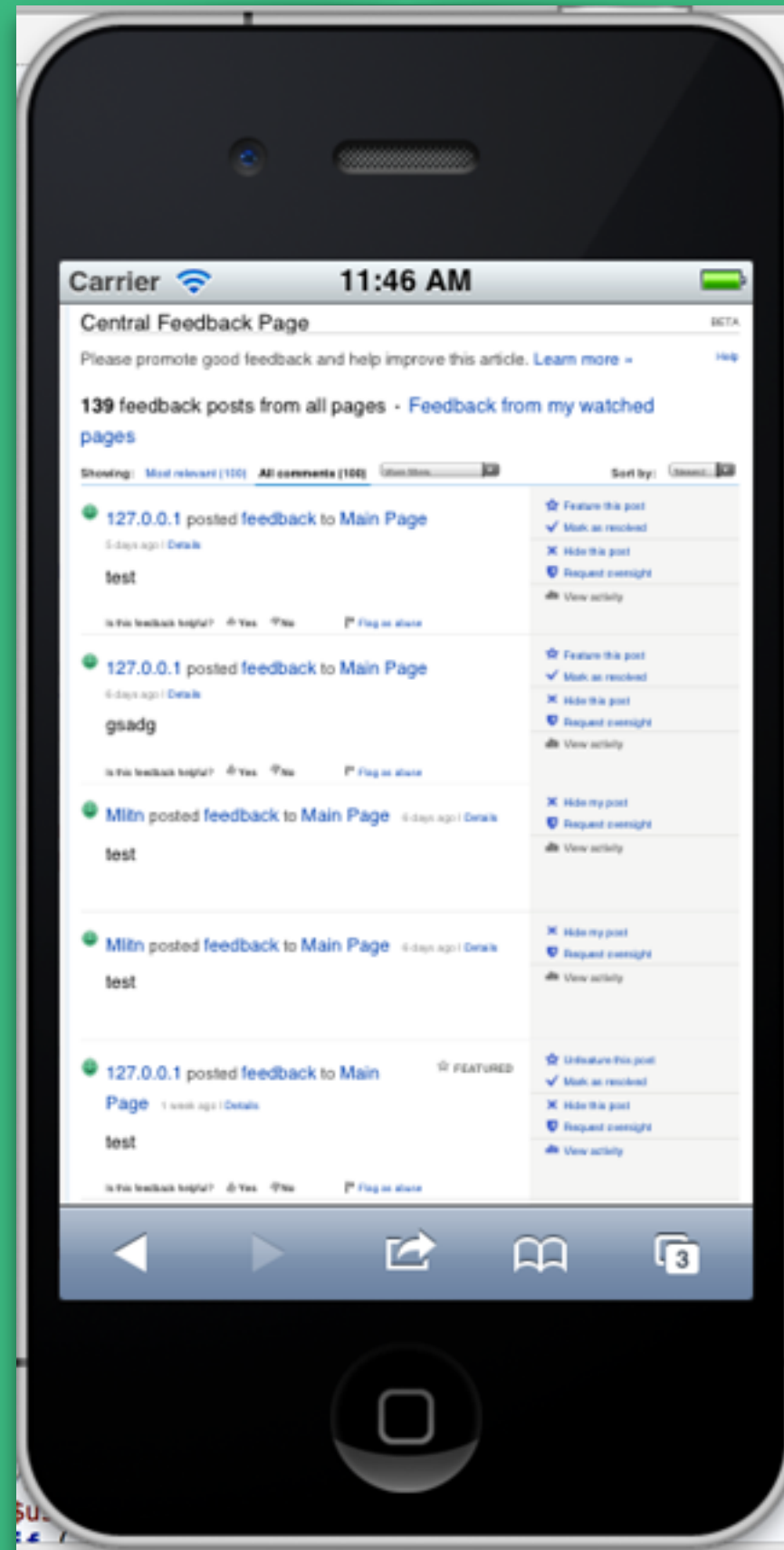
**Passed**

# Disabling Zoom

# Disabling Zoom



# Disabling Zoom



# Poor Line Height

# Poor Typography



# The Solution

# Choose Readable Typography

# Icons & Symbols

# Enable Zoom by Default

# Tools



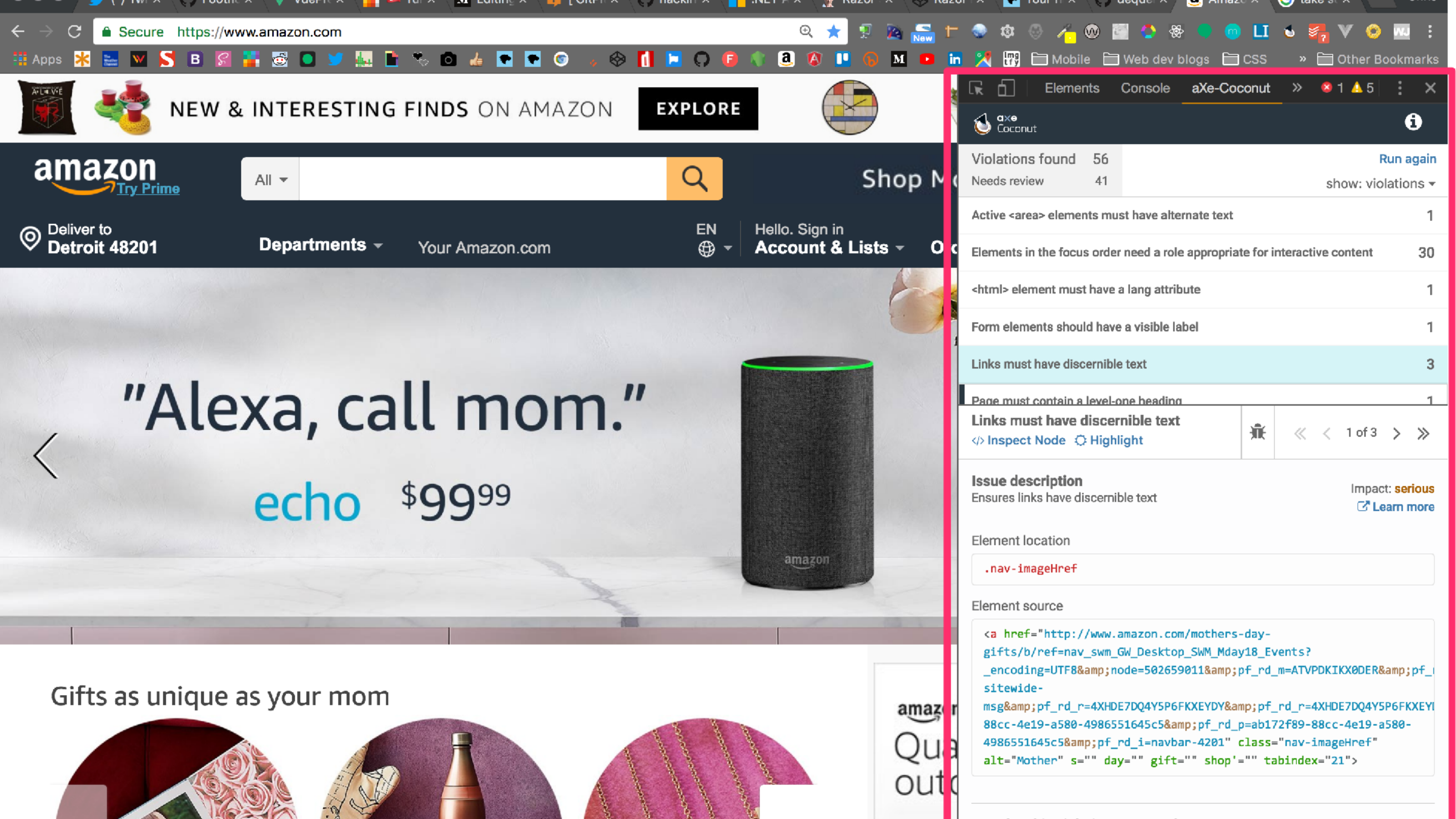
<https://github.com/dequelabs/axe-core>

# Browser Extensions & Testing Frameworks



**cy**press.io





Violations found	56	<a href="#">Run again</a>
Needs review	41	show: violations ▾

Active <area> elements must have alternate text	1
Elements in the focus order need a role appropriate for interactive content	30
<html> element must have a lang attribute	1
Form elements should have a visible label	1
Links must have discernible text	3
Page must contain a level-one heading	1
Links must have discernible text	1 of 3

**Issue description**  
Ensures links have discernible text  
Impact: **serious**  
[Learn more](#)

Element location  
`.nav-imageHref`

Element source

```
<a href="http://www.amazon.com/mothers-day-gifts/b/ref=nav_swm_GW_Desktop_SwM_Mday18_Events?_encoding=UTF8&node=502659011&pf_rd_m=ATVPDKIKX0DER&pf_sitewide-msg&pf_rd_r=4XHDE7DQ4Y5P6FKXEYDY&pf_rd_r=4XHDE7DQ4Y5P6FKXEY88cc-4e19-a580-4986551645c5&pf_rd_p=ab172f89-88cc-4e19-a580-4986551645c5&pf_rd_i=navbar-4201" class="nav-imageHref" alt="Mother" s="" day="" gift="" shop="" tabindex="21">
```



NEW & INTERESTING FINDS ON AMAZON

EXPLORE



All [Search Bar] [Search Icon]

Shop More

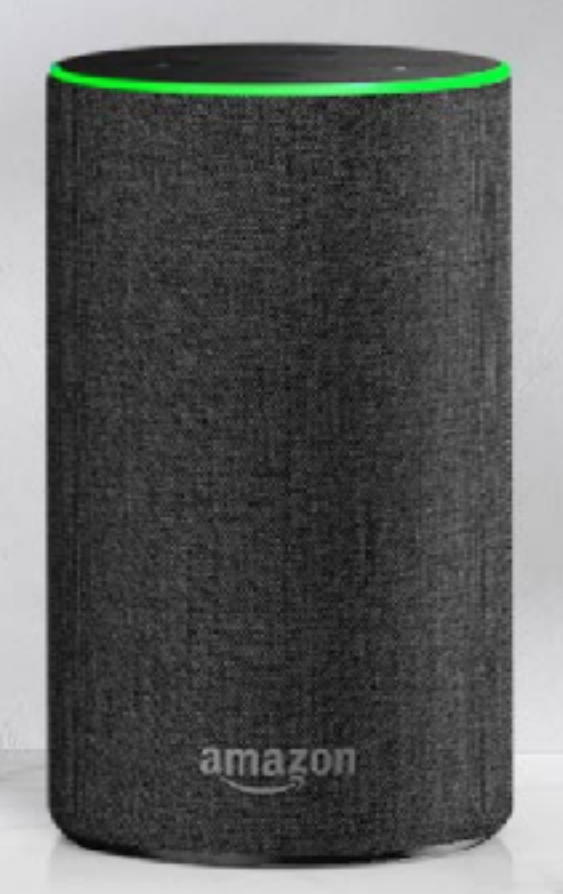
Deliver to Detroit 48201

Departments Your Amazon.com

EN Hello. Sign in Account & Lists

"Alexa, call mom."

echo \$99.99



Gifts as unique as your mom



amazon  
Qu  
out





```
9     }  
10    "dependencies": {  
11      "axe-core": "3.2.2",  
12      "chrome-launcher": "^0.10.7",  
13      "configstore": "^3.1.1",  
14      "electron": "1.8.4"
```

# Takeaways

# Takeaways

**Use Colors That Work**

# Takeaways

**Use Colors That Work**

**Run Web Sites Through a Testing/Audit Tool**

# Takeaways

**Use Colors That Work**

**Run Web Sites Through a Testing/Audit Tool**

**Choose Proper Typography**

# Takeaways

**Use Colors That Work**

**Run Web Sites Through a Testing/Audit Tool**

**Choose Proper Typography**

**Use A Plugin For Your Editor For Testing**

# Takeaways

**Use Colors That Work**

**Run Web Sites Through a Testing/Audit Tool**

**Choose Proper Typography**

**Use A Plugin For Your Editor For Testing**

**Leave Zoom Alone!**

**“Every Little Bit Of Accessibility You  
Contribute Is So Appreciated And  
So Needed.”**



- Marcy Sutton



# Resources & Credits

<https://bit.ly/2BheA2c>

# Thanks!

