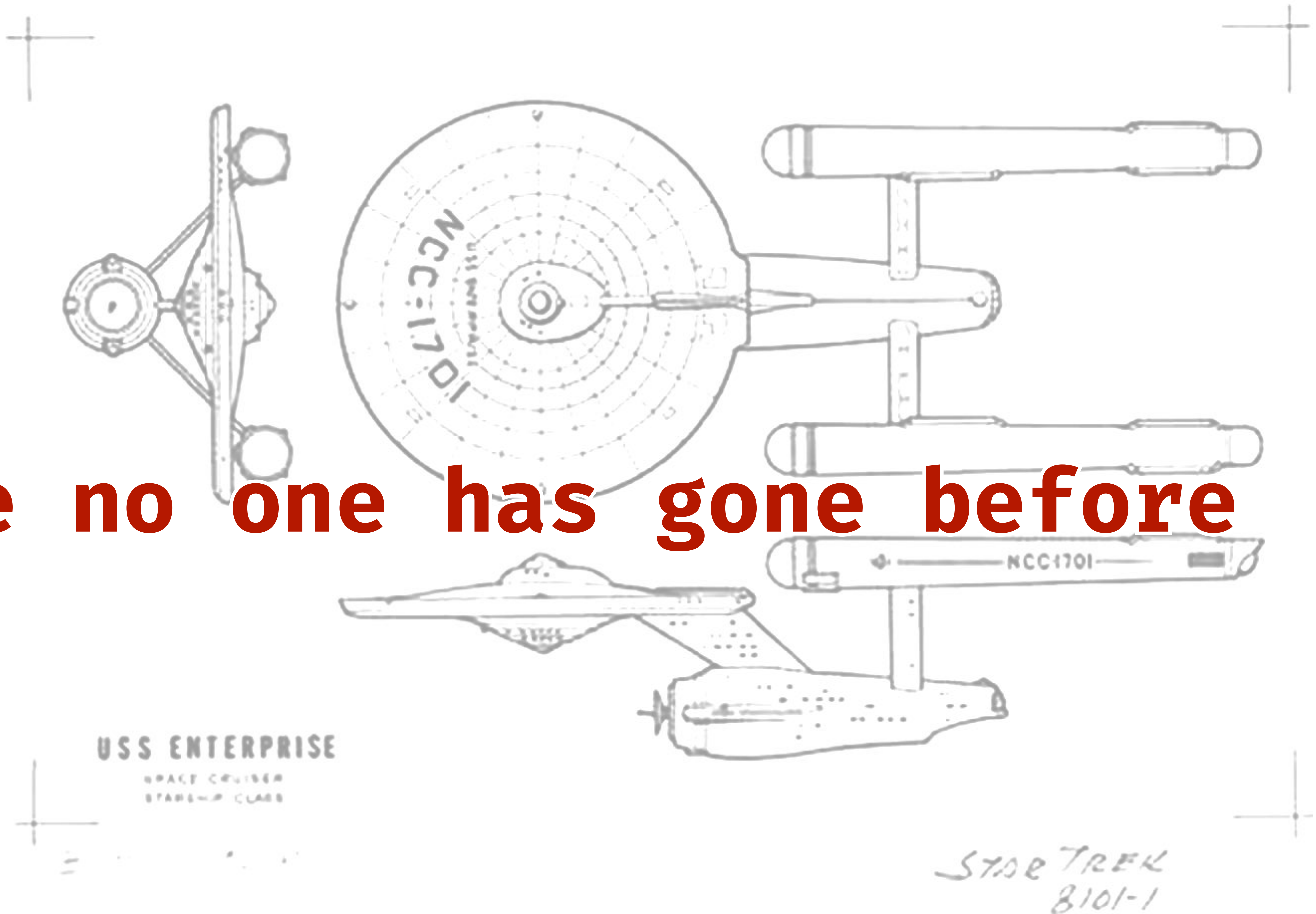
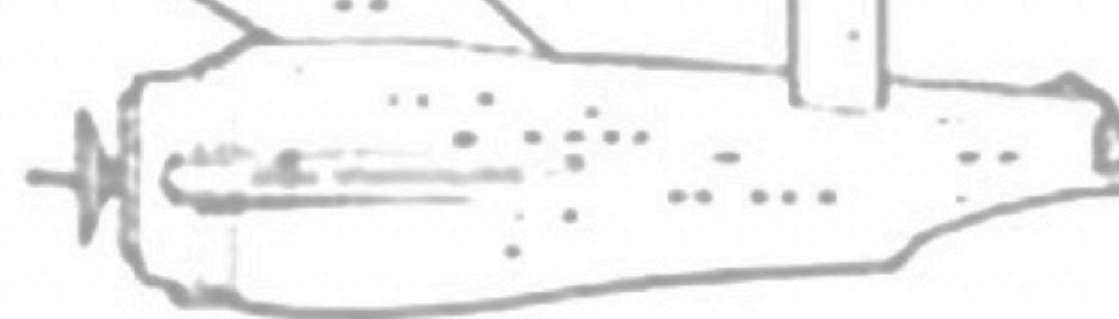
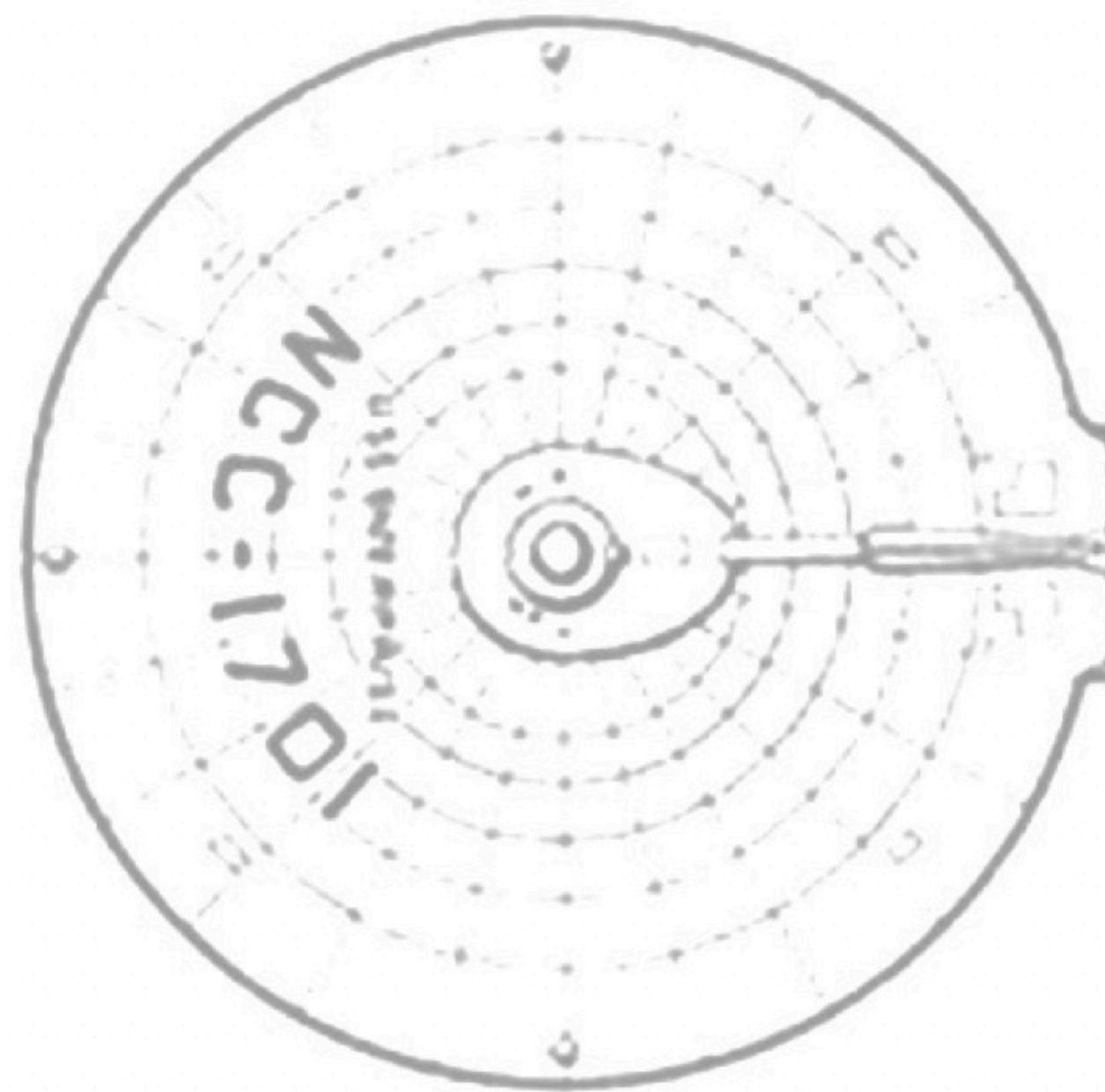
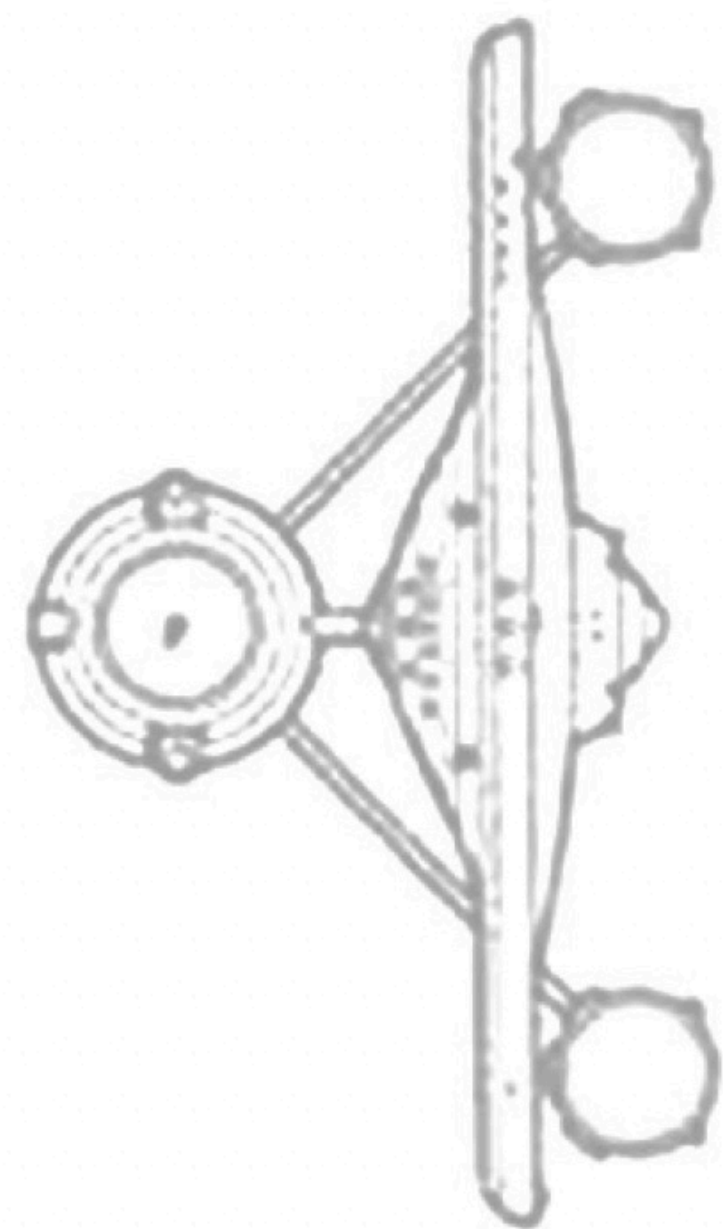


**Where no one has gone before**



**WHERE NO ONE  
HAS GONE BEFORE**



USS ENTERPRISE  
SPACE CRUISER  
STARSHIP CLASS

STAR TREK  
8101-1





**WHERE NO ONE HAS GONE BEFORE**













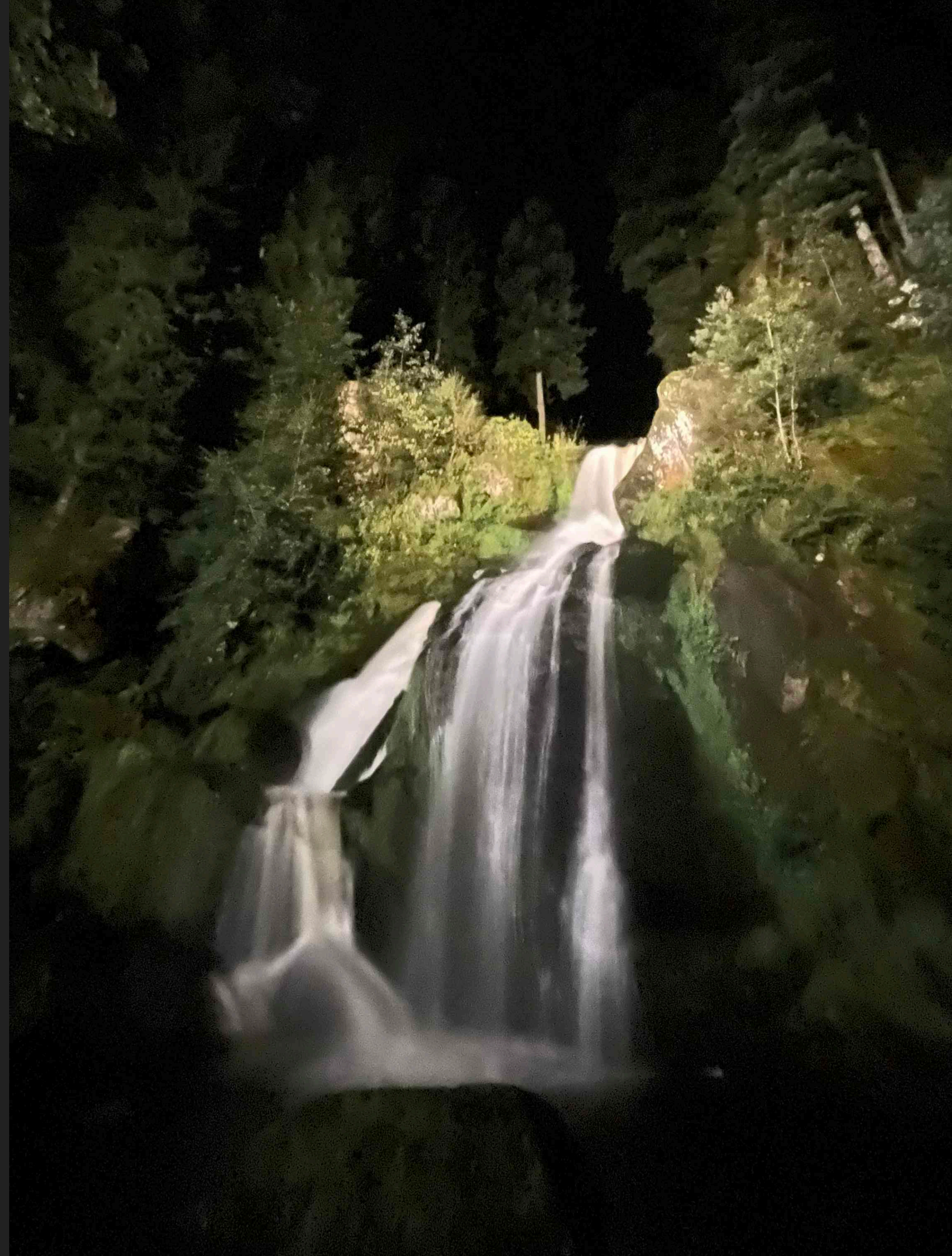




























Zollhaus



A scenic landscape featuring a dense forest of evergreen trees covering a valley. Mist or low clouds are rising from the forest, partially obscuring the distant hills. In the foreground, there is a grassy field with tall, golden-brown grasses on the left and a large, leafy green tree on the right. A wooden picnic table is visible in the lower right corner. The sky is filled with dramatic, grey clouds, with a bright patch of light breaking through on the left side.

**WHERE NO ONE HAS GONE BEFORE**





UHREN-PARK

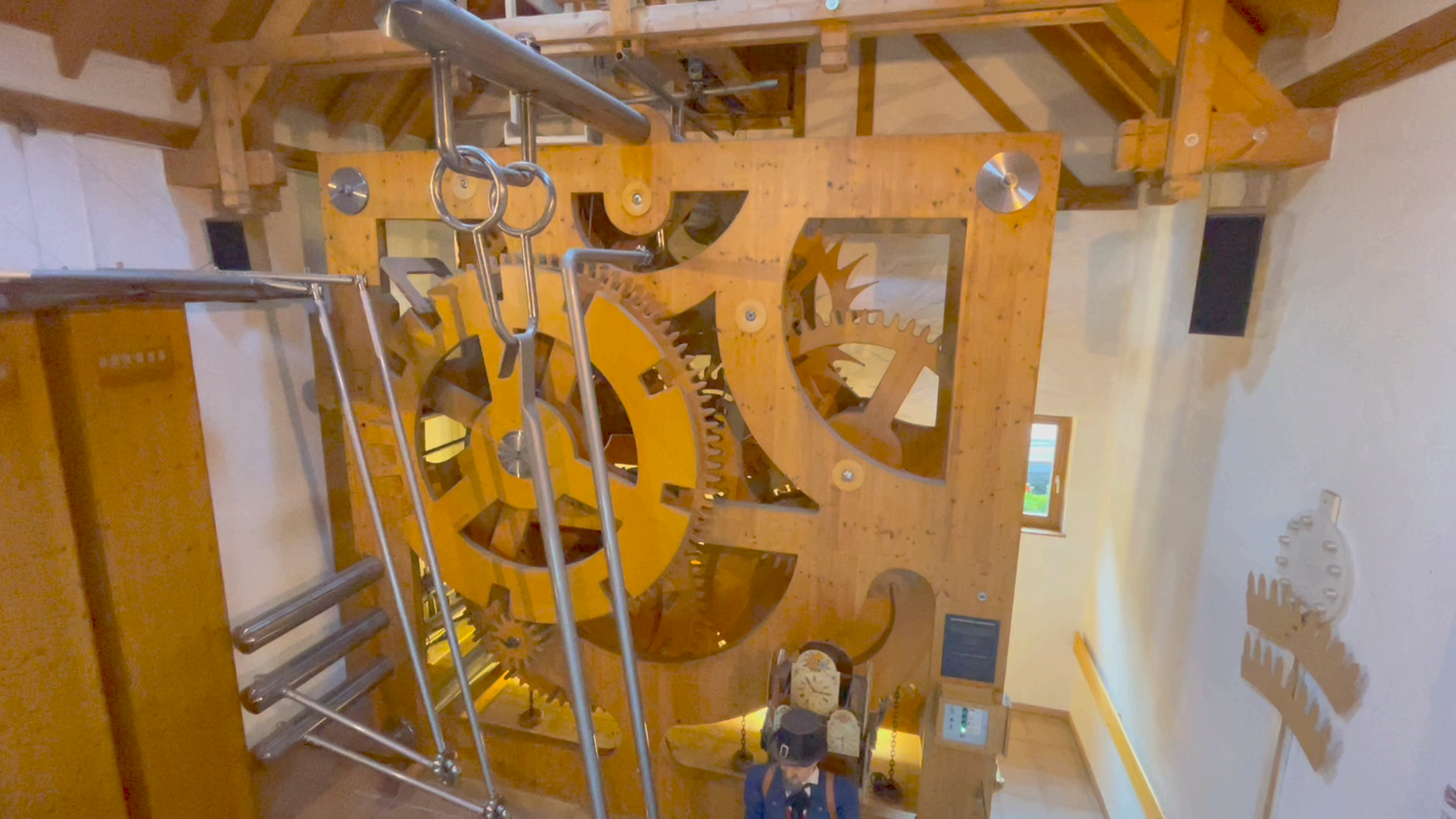
esle  
Uhren-Park

UHREN-PARK

Die größte  
Kuckucksuhr  
der Welt  
the world's  
biggest  
cuckoo clock

WHERE NO ONE HAS GONE BEFORE



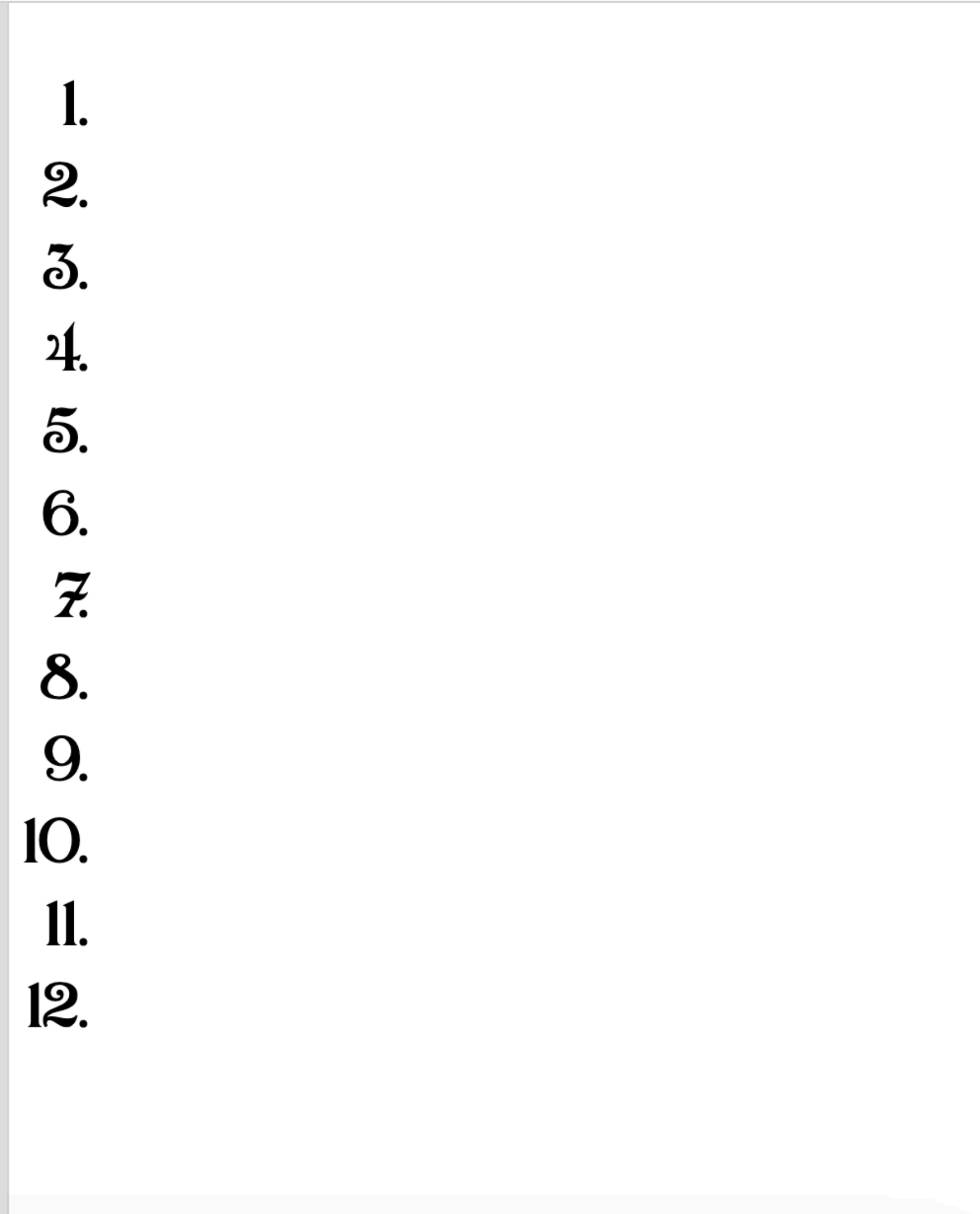




HTML

CSS




```
1 html {
2   font: 2em/1.3 Alchemist, serif;
3   font-feature-settings: 'ss01';
4 }
5
6 ol {
7   /* list-style-type: upper-roman; */
8   /* list-style-position: inside; */
9   /* text-align: center; */
10 }
11
```



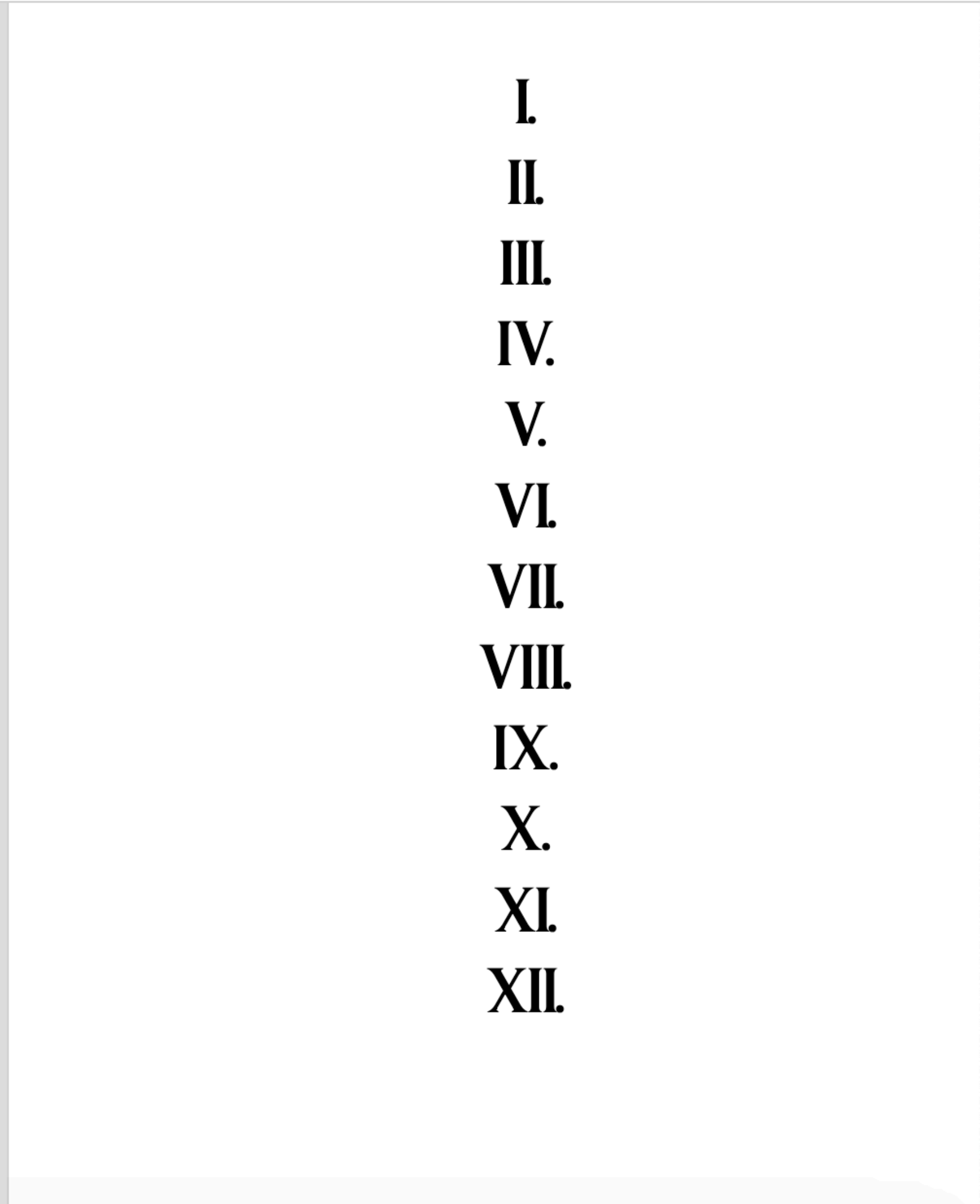
JS



 **1 list-style**   
Gunnar Bittersmann

  Save  Settings   

```
HTML
CSS
1 html {
2   font: 2em/1.3 Alchemist, serif;
3   /* font-feature-settings: 'ss01'; */
4 }
5
6 ol {
7   list-style-type: upper-roman;
8   list-style-position: inside;
9   text-align: center;
10 }
11
JS
```

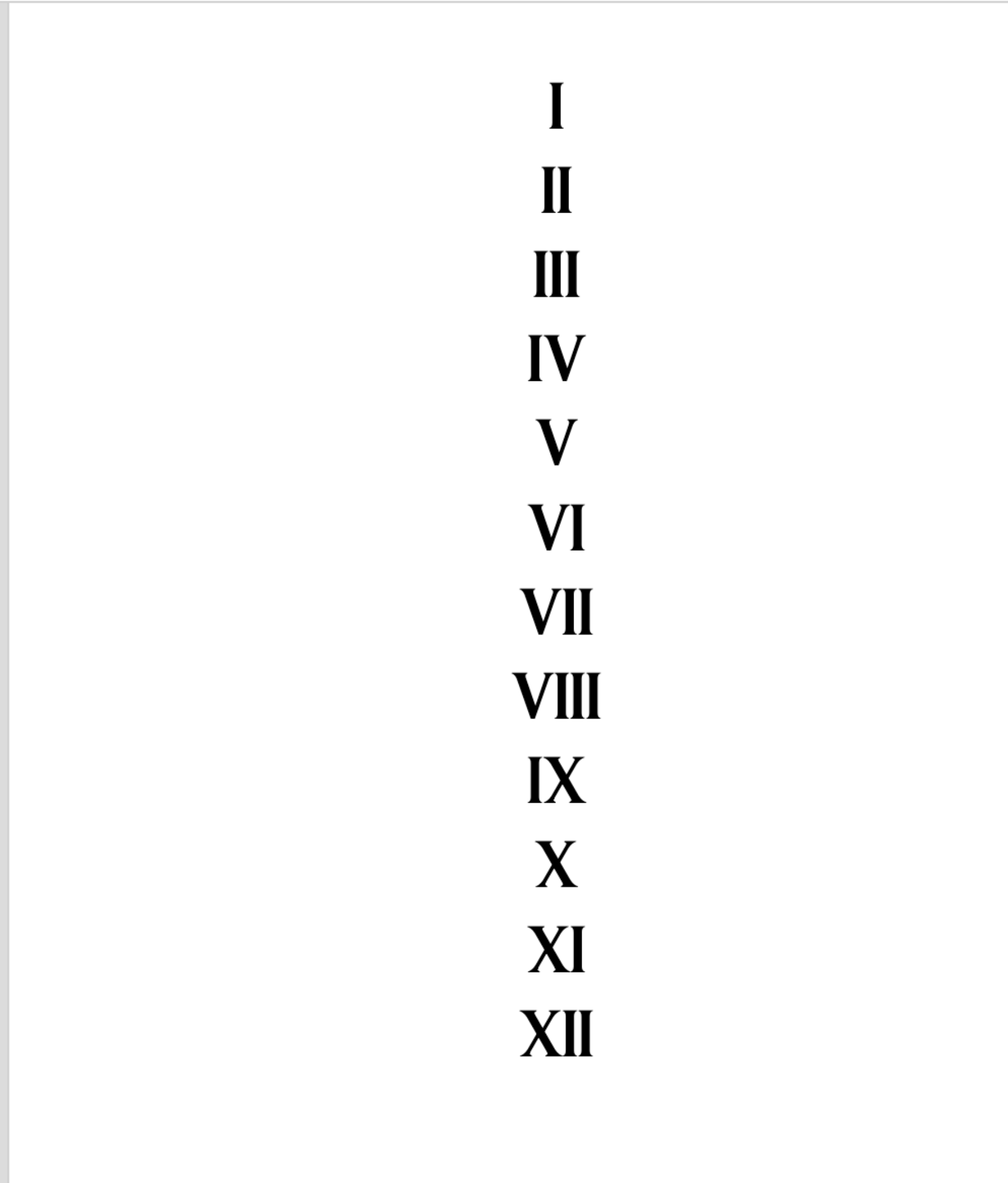




```

HTML
CSS
1 html {
2   font: 2em/1.3 Alchemist, serif;
3 }
4
5 ol {
6   list-style: upper-roman inside;
7   text-align: center;
8 }
9
10 li {
11   counter-increment: my-counter;
12 }
13
14 li::marker {
15   content: counter(my-counter, upper-roman);
16 }
17

```

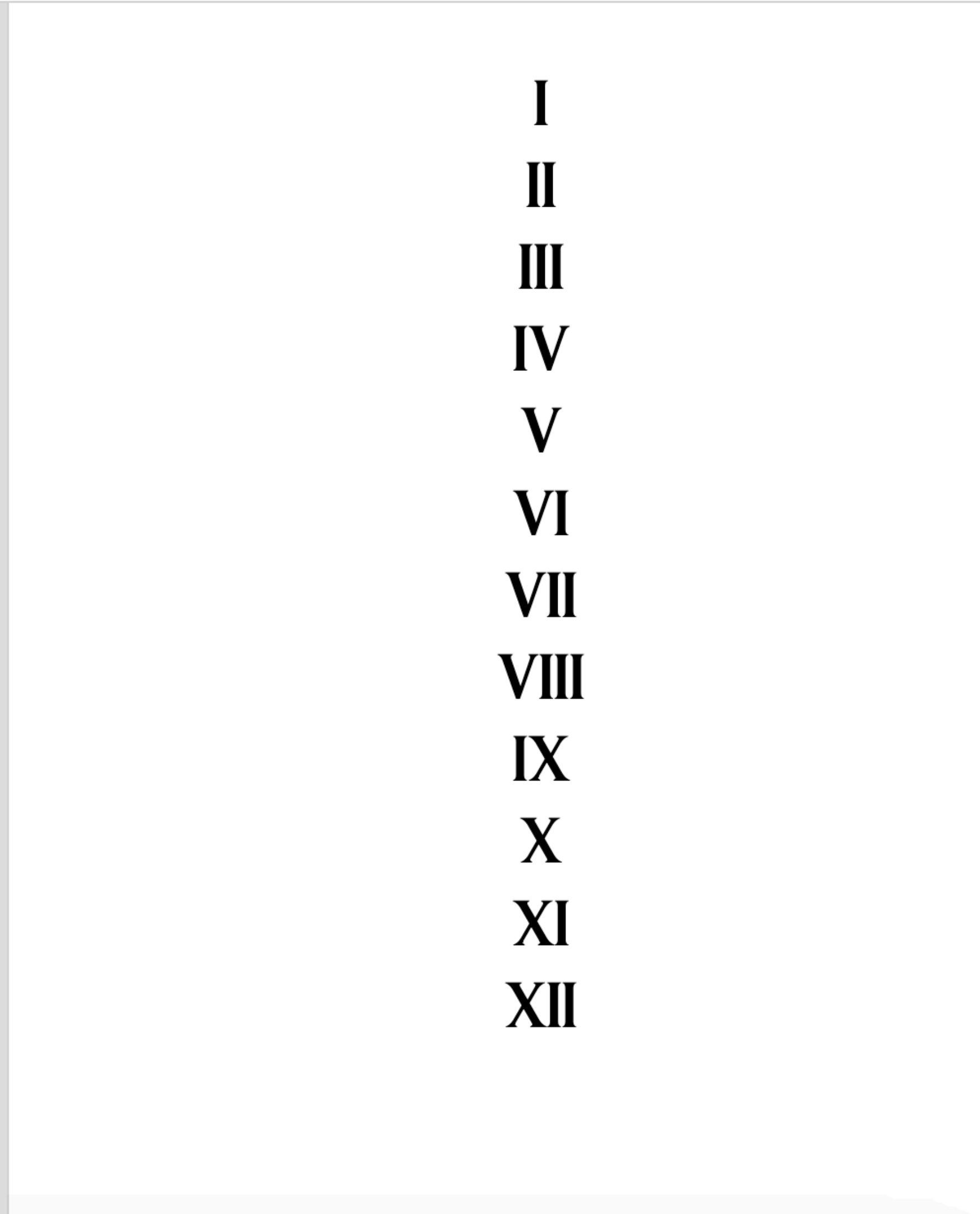




HTML

CSS

```
1 html {
2   font: 2em/1.3 Alchemist, serif;
3 }
4
5 ol {
6   list-style: upper-roman inside;
7   text-align: center;
8 }
9
10 li::marker {
11   content: counter(list-item, upper-roman);
12 }
13
```



JS



















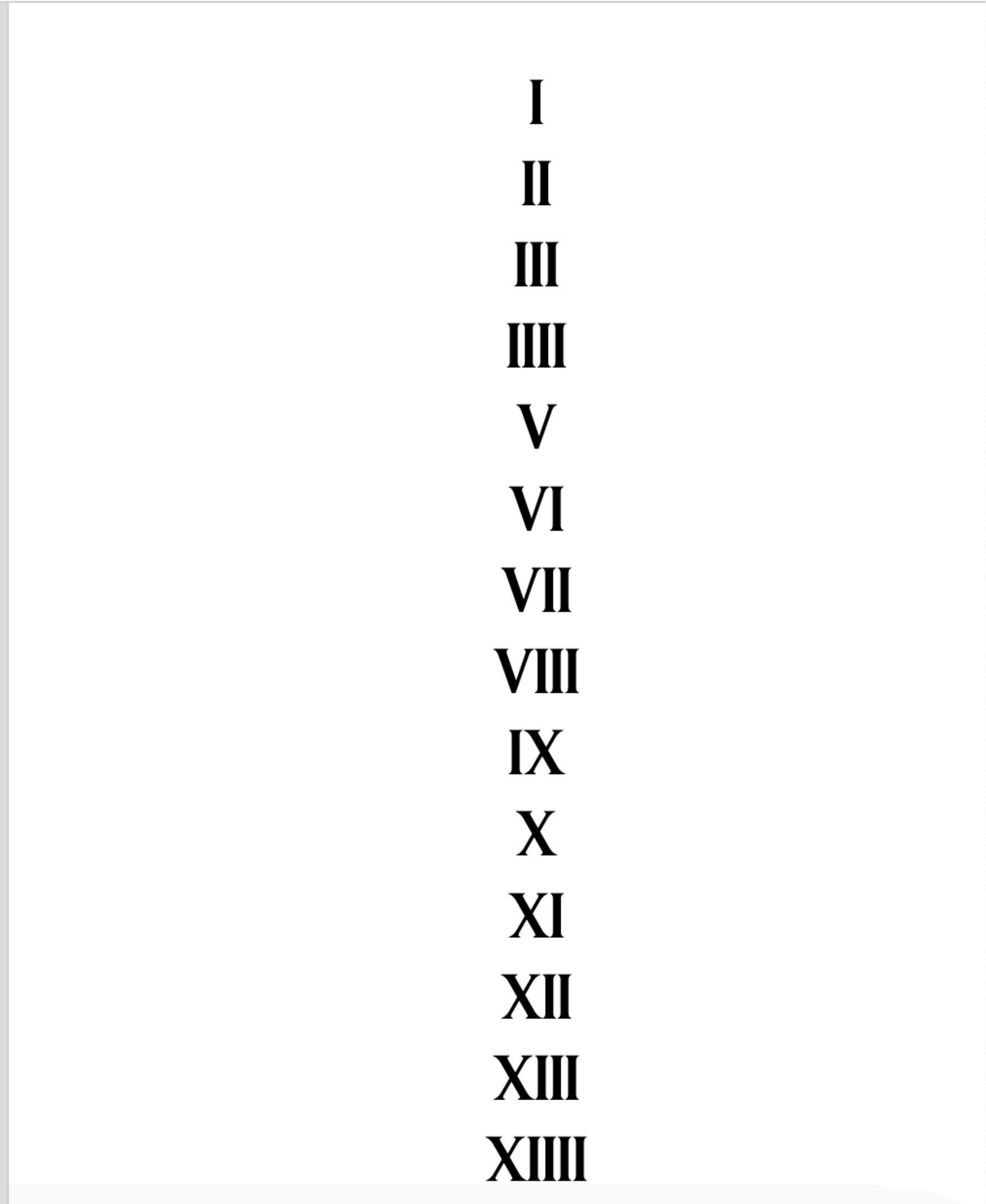




4 @counter-style upper-roman   
Gunnar Bittersmann

Save Settings

```
HTML
CSS
13
14 @counter-style upper-roman {
15   system: additive;
16   range: 1 3999;
17   additive-symbols:
18     1000 M,
19     900 CM,
20     500 D,
21     400 CD,
22     100 C,
23     90 XC,
24     50 L,
25     40 XL,
26     10 X,
27     9 IX,
28     5 V,
29     1 I;
30 }
JS
```





# Royal Observatory Greenwich



**THE SHEPHERD  
24-HOUR GATE CLOCK**  
This is one of the earliest mechanical alarm clocks  
made and was made between 1810 and 1820. The clock  
was designed by John Shepherd, an inventor from  
London. It is a 24-hour clock, which means it can  
show the time of day and night. It is made of brass  
and is a very fine example of the work of a  
craftsman.

**THE TIME BALL**  
The Time Ball was first used in 1829. It was  
a ball that was raised to the top of a pole  
at the end of each day. It was used to  
show the time to ships in the harbor.  
The Time Ball was first used in 1829. It was  
a ball that was raised to the top of a pole  
at the end of each day. It was used to  
show the time to ships in the harbor.



**ORDNANCE SURVEY  
BENCH MARK**  
The bench mark is a point of reference for  
the Ordnance Survey. It is a point of  
reference for the height of the land.  
The bench mark is a point of reference for  
the height of the land.

**PUBLIC STANDARDS  
OF LENGTH**  
The public standards of length are  
used to measure the length of things.  
The public standards of length are used  
to measure the length of things.





SHEPHERD PATENTEE

53 LEADENHALL ST LONDON

CALVA O-MAGNETIC CLOCK



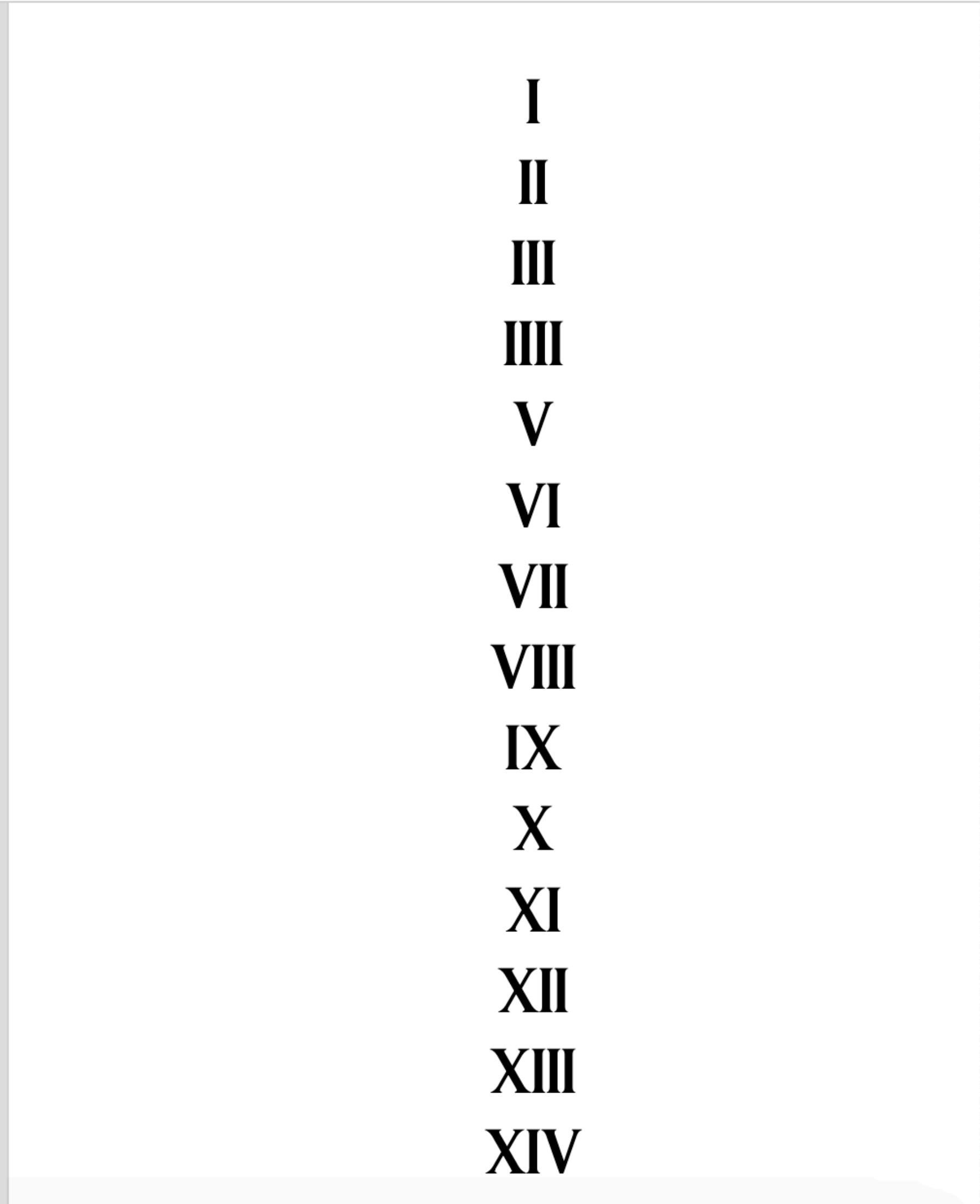
5 :nth-of-type Gunnar Bittersmann

Save Settings

```

HTML
CSS
9
10 li::marker {
11   content: counter(list-item, upper-roman);
12 }
13
14 li:nth-of-type(4)::marker {
15   content: 'IIII';
16 }
17
JS

```

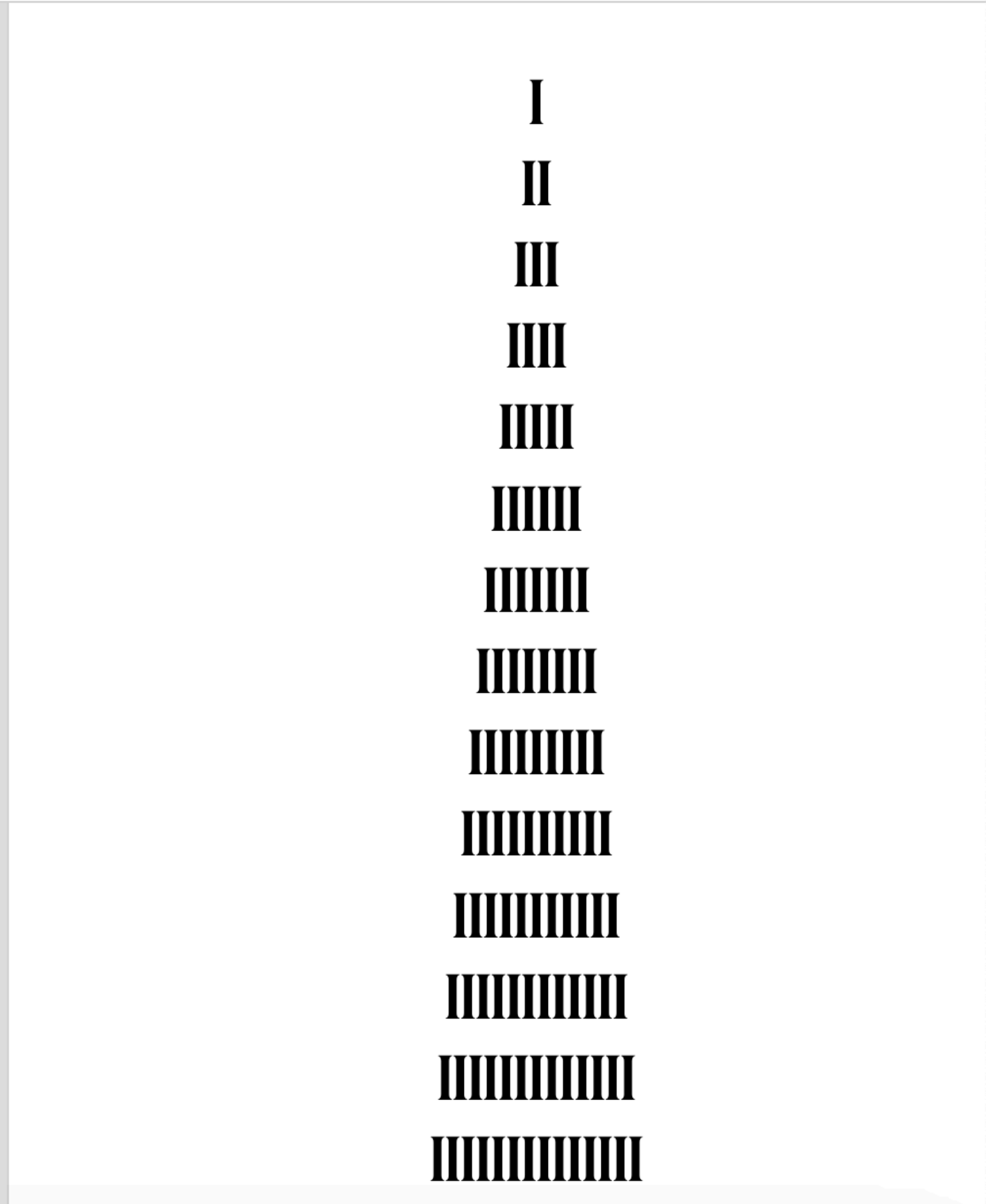




```

HTML
CSS
6
7 li::marker {
8   content: counter(list-item, iii-roman);
9 }
10
11 @counter-style iii-roman {
12 /* range: 4 4; */
13   system: symbolic;
14   symbols: 'I';
15   fallback: upper-roman;
16 }
17
JS

```

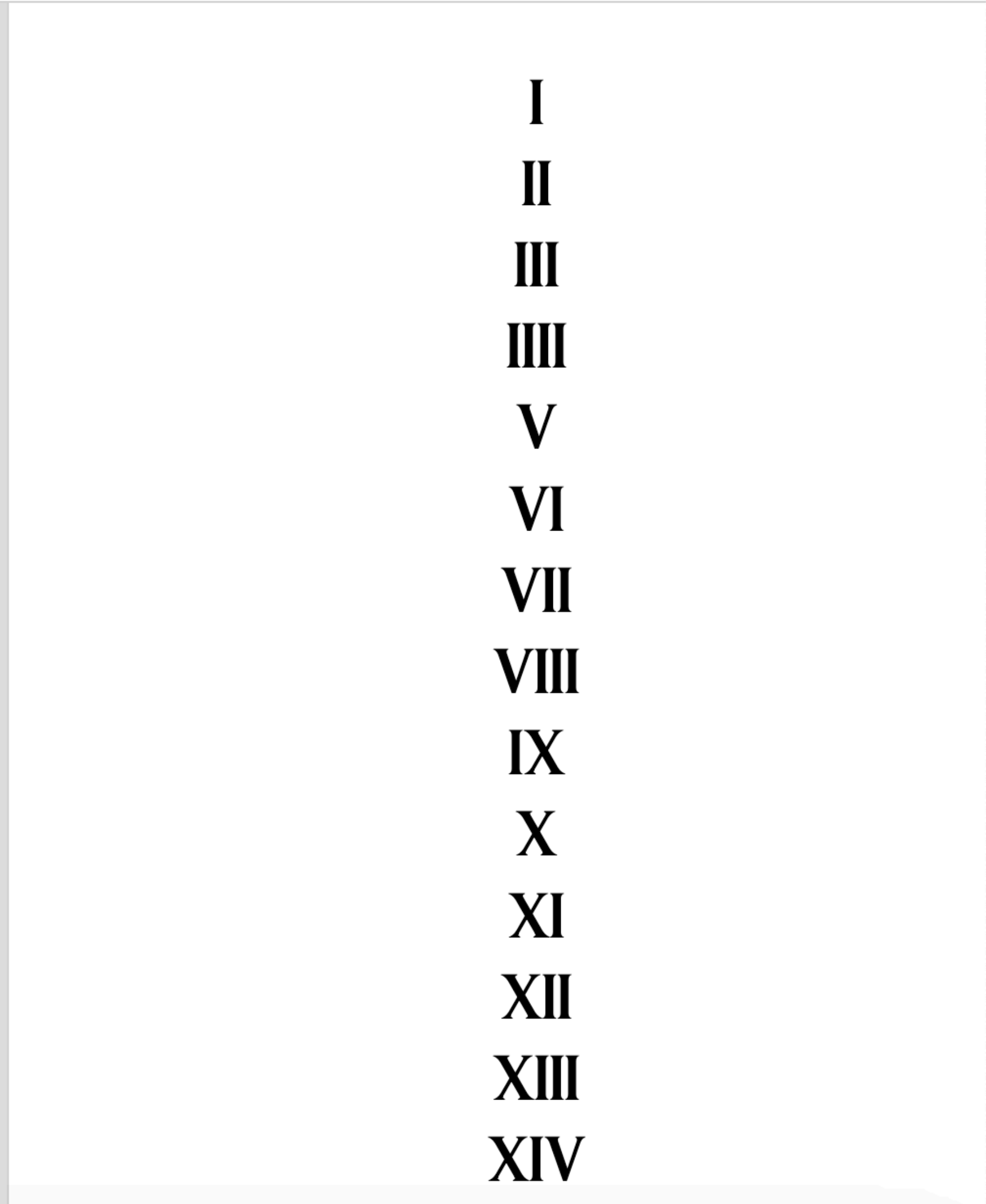




```

HTML
CSS
6
7 li::marker {
8   content: counter(list-item, iii-roman);
9 }
10
11 @counter-style iii-roman {
12   range: 4 4;
13   system: symbolic;
14   symbols: 'I';
15   fallback: upper-roman;
16 }
17
JS

```

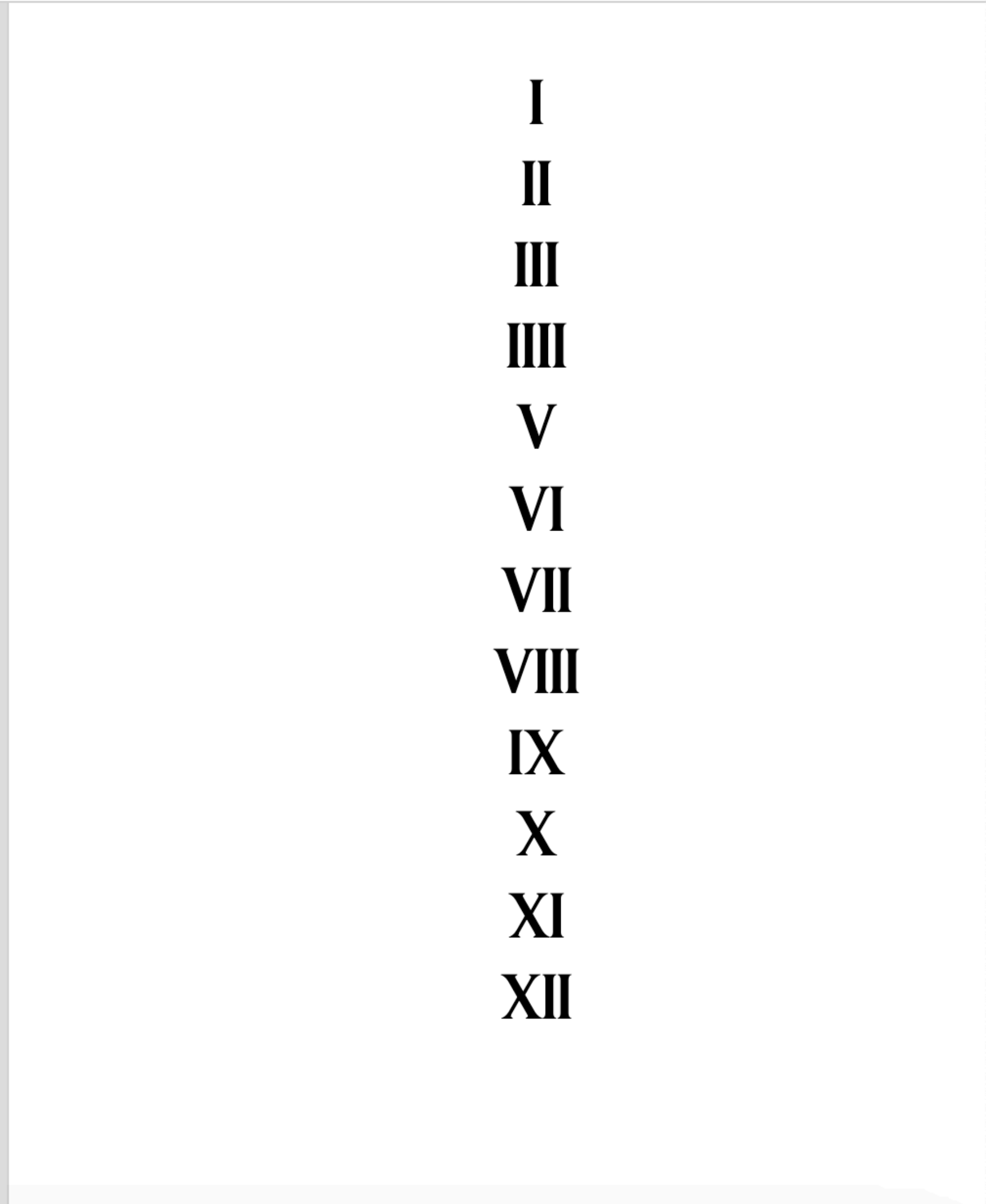




```

HTML
CSS
6
7 li:nth-of-type(1) { --index: 1 }
8 li:nth-of-type(2) { --index: 2 }
9 li:nth-of-type(3) { --index: 3 }
10 li:nth-of-type(4) { --index: 4 }
11 li:nth-of-type(5) { --index: 5 }
12 li:nth-of-type(6) { --index: 6 }
13 li:nth-of-type(7) { --index: 7 }
14 li:nth-of-type(8) { --index: 8 }
15 li:nth-of-type(9) { --index: 9 }
16 li:nth-of-type(10) { --index: 10 }
17 li:nth-of-type(11) { --index: 11 }
18 li:nth-of-type(12) { --index: 12 }
19
20 li::marker {
21   content: counter(list-item, iii-roman);
22 }
23
24 @counter-style iii-roman {
JS

```





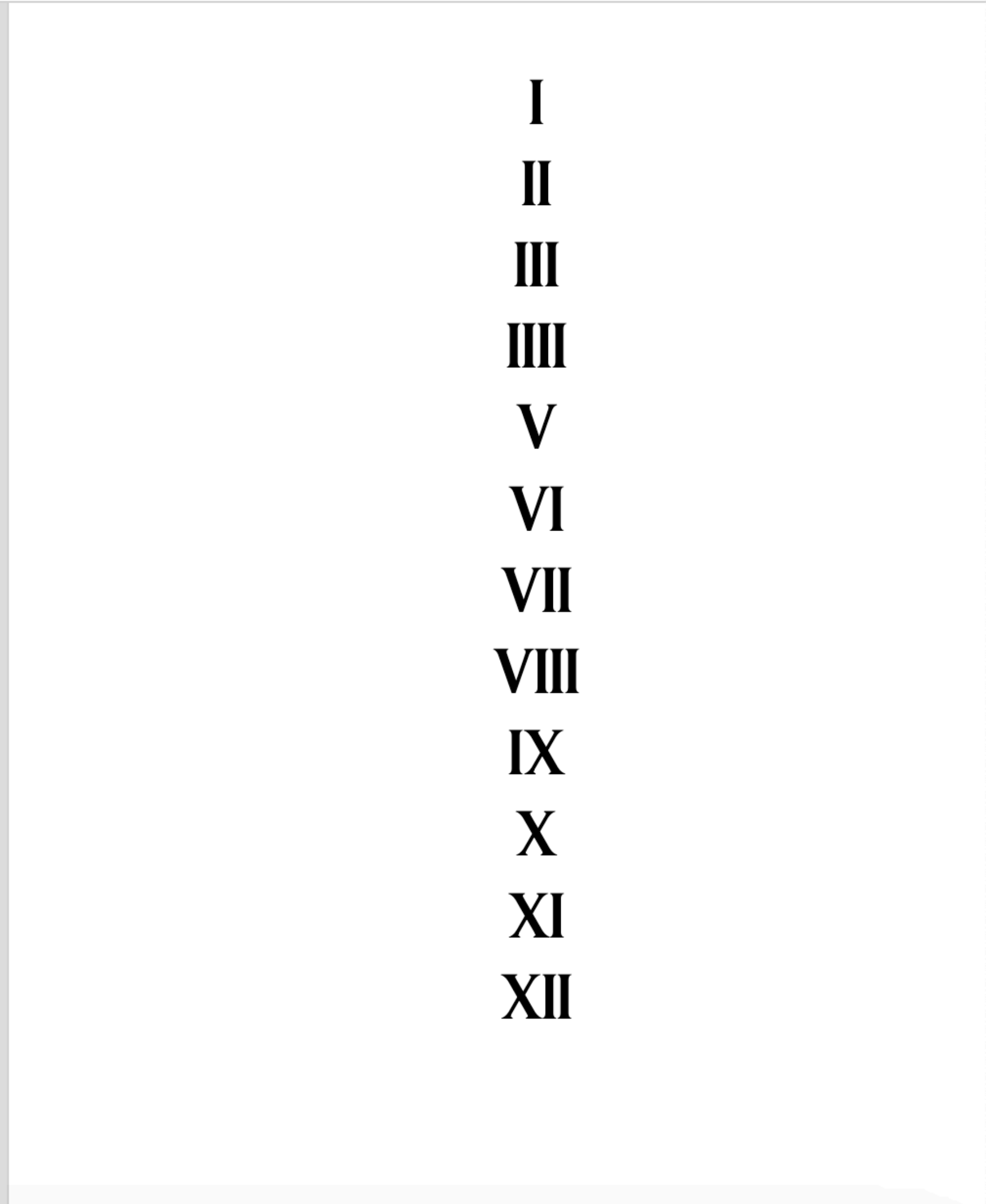
8:has() Gunnar Bittersmann

Save Settings

```

HTML
CSS
6
7 ol:has(li:nth-of-type(1)) { --count: 1 }
8 ol:has(li:nth-of-type(2)) { --count: 2 }
9 ol:has(li:nth-of-type(3)) { --count: 3 }
10 ol:has(li:nth-of-type(4)) { --count: 4 }
11 ol:has(li:nth-of-type(5)) { --count: 5 }
12 ol:has(li:nth-of-type(6)) { --count: 6 }
13 ol:has(li:nth-of-type(7)) { --count: 7 }
14 ol:has(li:nth-of-type(8)) { --count: 8 }
15 ol:has(li:nth-of-type(9)) { --count: 9 }
16 ol:has(li:nth-of-type(10)) { --count: 10 }
17 ol:has(li:nth-of-type(11)) { --count: 11 }
18 ol:has(li:nth-of-type(12)) { --count: 12 }
19
20 li:nth-of-type(1) { --index: 1 }
21 li:nth-of-type(2) { --index: 2 }
22 li:nth-of-type(3) { --index: 3 }
23 li:nth-of-type(4) { --index: 4 }
24 li:nth-of-type(5) { --index: 5 }
JS

```





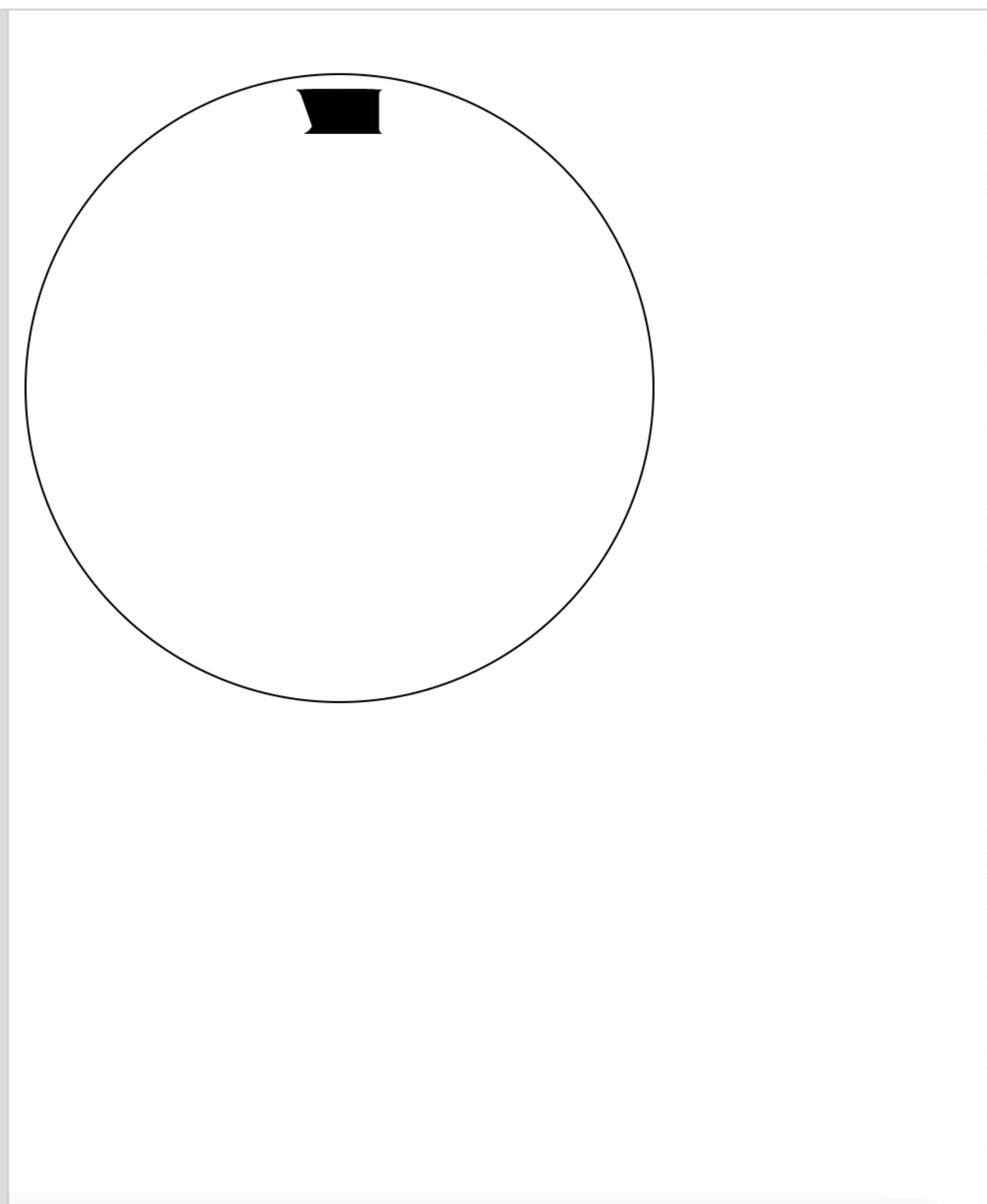
9 aspect-ratio  
Gunnar Bittersmann

Save Settings

HTML

\* CSS

```
1 ol {
2   font: 2em/1.3 Alchemist, serif;
3   list-style: upper-roman inside;
4   text-align: center;
5   width: 10em;
6   border: thin solid;
7   border-radius: 50%;
8   aspect-ratio: 1;
9   padding: 0;
10  display: grid;
11 }
12
13 ol:has(li:nth-of-type(1)) { --count: 1 }
14 ol:has(li:nth-of-type(2)) { --count: 2 }
15 ol:has(li:nth-of-type(3)) { --count: 3 }
16 ol:has(li:nth-of-type(4)) { --count: 4 }
17 ol:has(li:nth-of-type(5)) { --count: 5 }
18 ol:has(li:nth-of-type(6)) { --count: 6 }
19 ol:has(li:nth-of-type(7)) { --count: 7 }
```



JS



10 rotate  
Gunnar Bittersmann

Save Settings

```

HTML
CSS
25
26 li {
27   grid-area: 1 / 1;
28   rotate: calc(var(--index)/var(--count) * 1turn);
29 }
30
31 li:nth-of-type(1) { --index: 1 }
32 li:nth-of-type(2) { --index: 2 }
33 li:nth-of-type(3) { --index: 3 }
34 li:nth-of-type(4) { --index: 4 }
35 li:nth-of-type(5) { --index: 5 }
36 li:nth-of-type(6) { --index: 6 }
37 li:nth-of-type(7) { --index: 7 }
38 li:nth-of-type(8) { --index: 8 }
39 li:nth-of-type(9) { --index: 9 }
40 li:nth-of-type(10) { --index: 10 }
41 li:nth-of-type(11) { --index: 11 }
42 li:nth-of-type(12) { --index: 12 }
43
JS

```

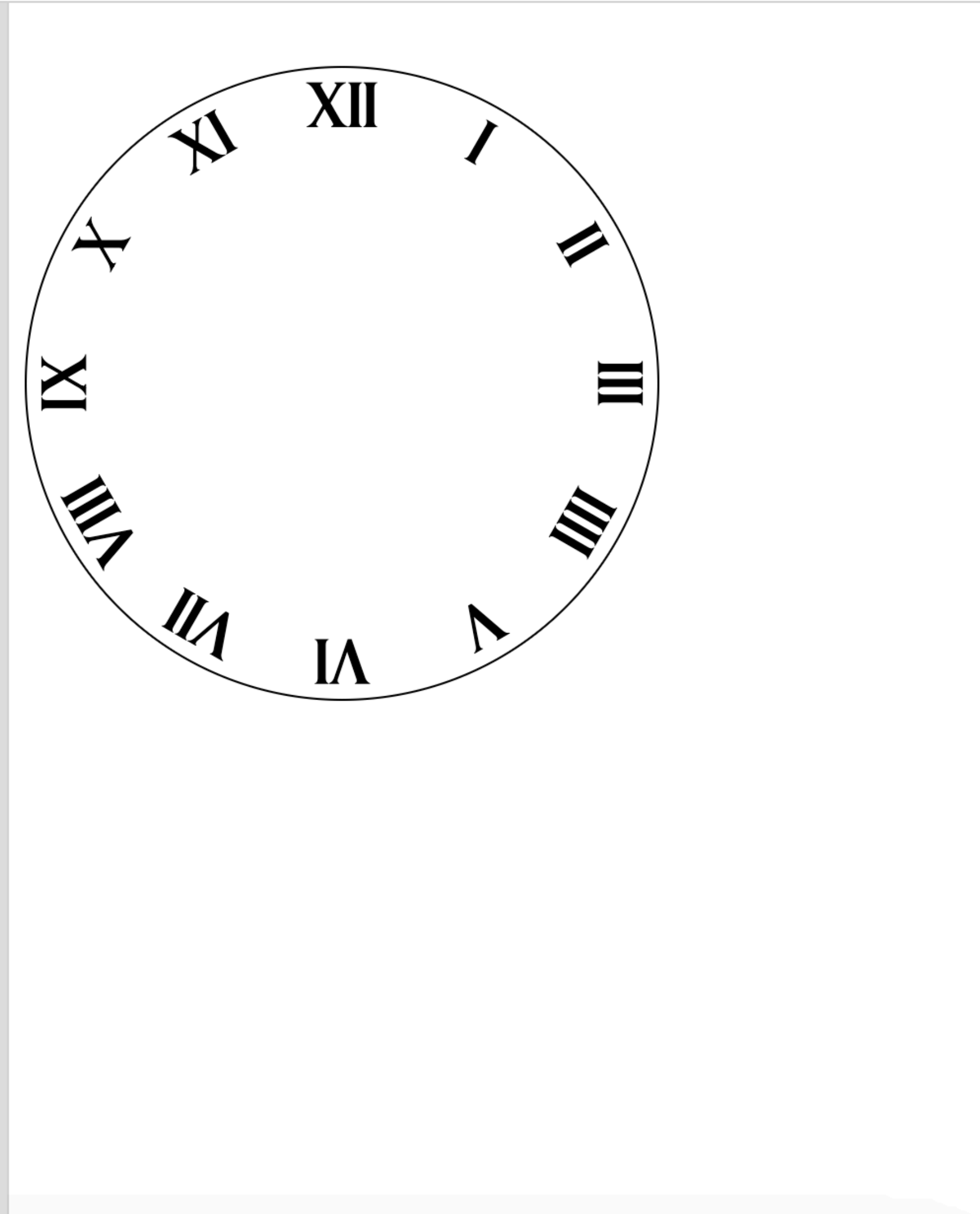






Photo by Black Chitsulo on Unsplash



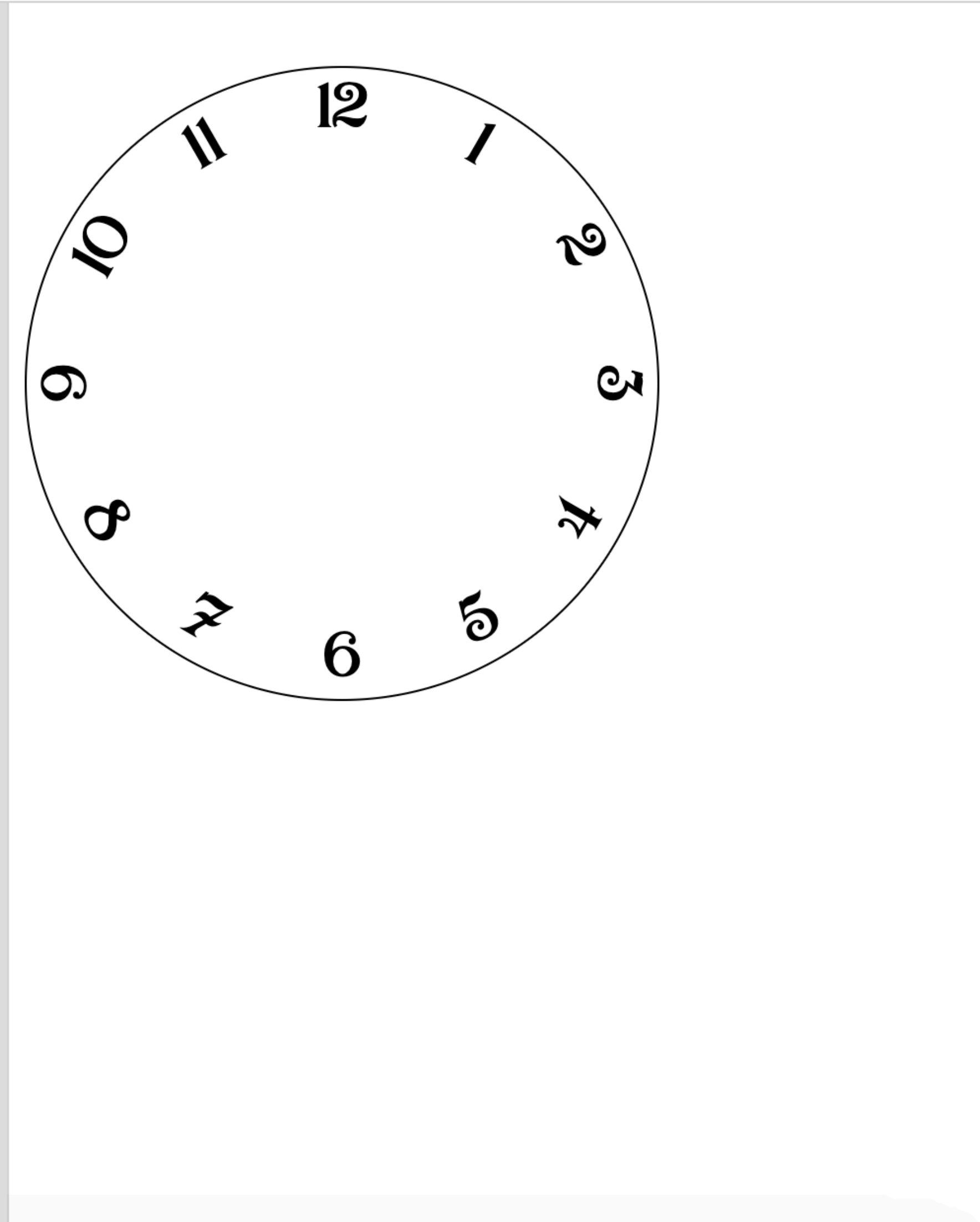
Photo by Jiyeon Park on Unsplash



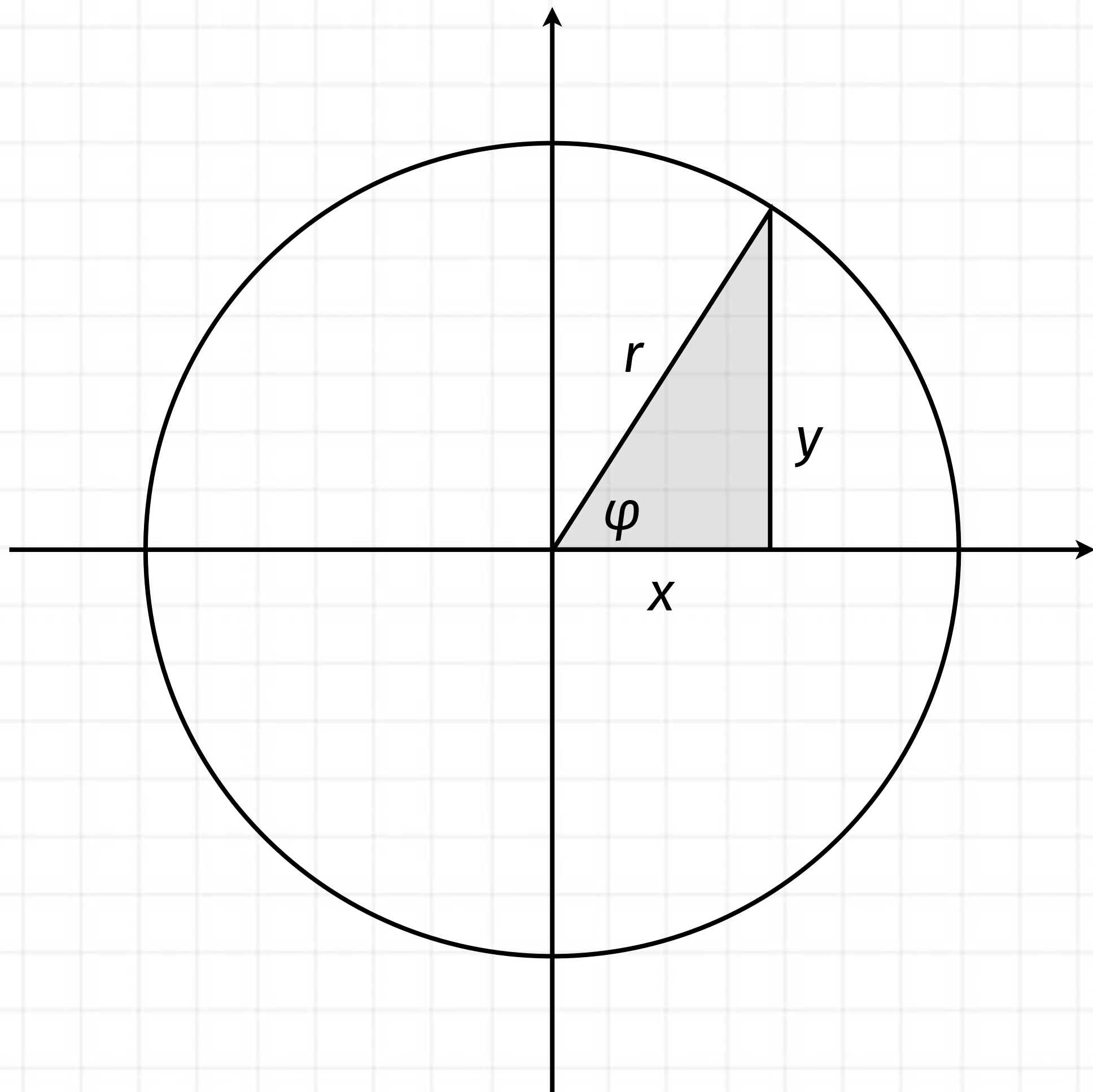
```

HTML
CSS
44
45 li::before {
46   content: counter(list-item, decimal);
47   display: block;
48 }
49
50 li:nth-of-type(n+4):nth-child(-n+8)::before {
51   scale: -1;
52 }
53
JS

```







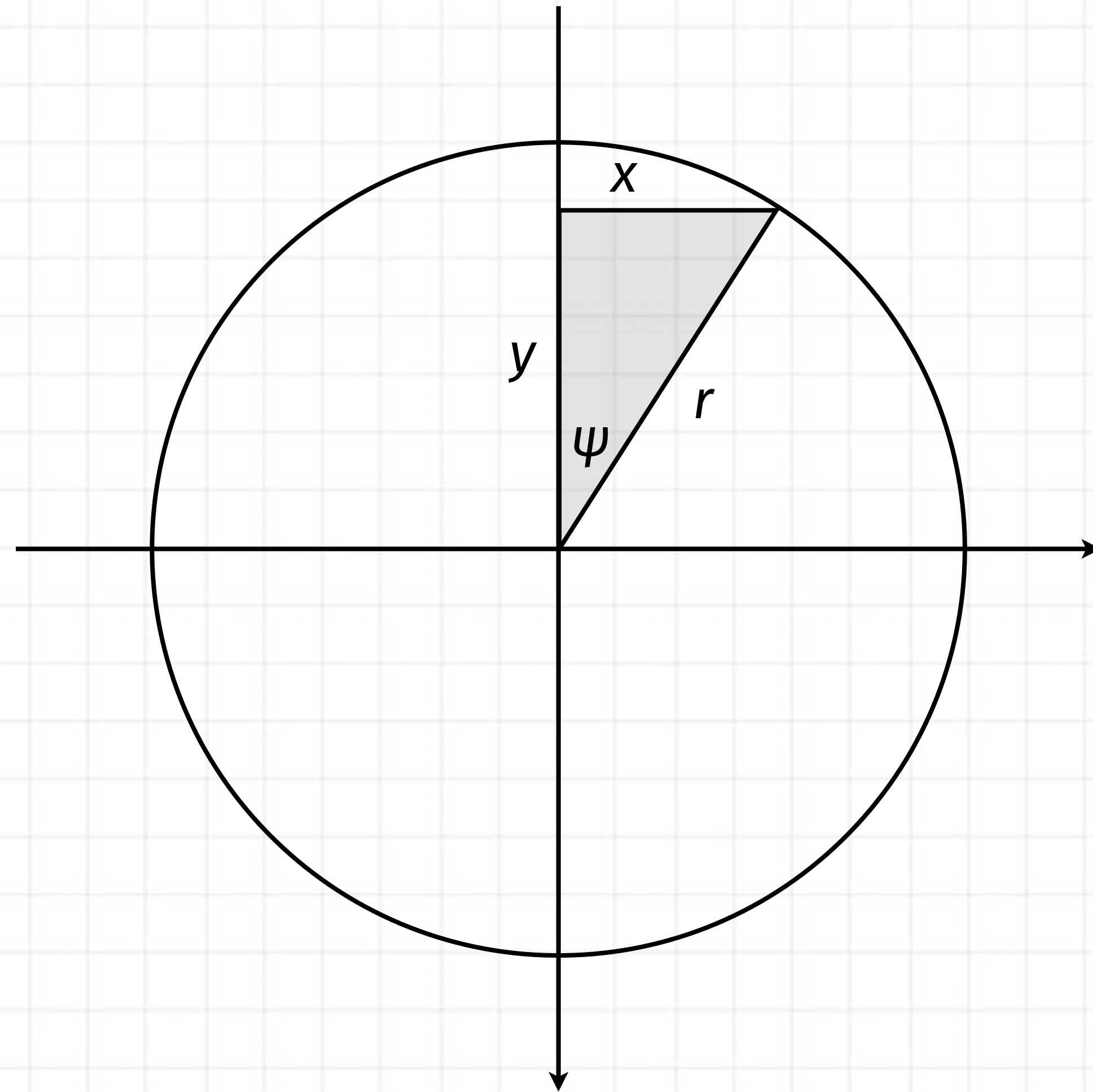
$$\sin \varphi = y / r$$

$$\cos \varphi = x / r$$

$$\tan \varphi = y / x$$

$$y = r \sin \varphi$$

$$x = r \cos \varphi$$

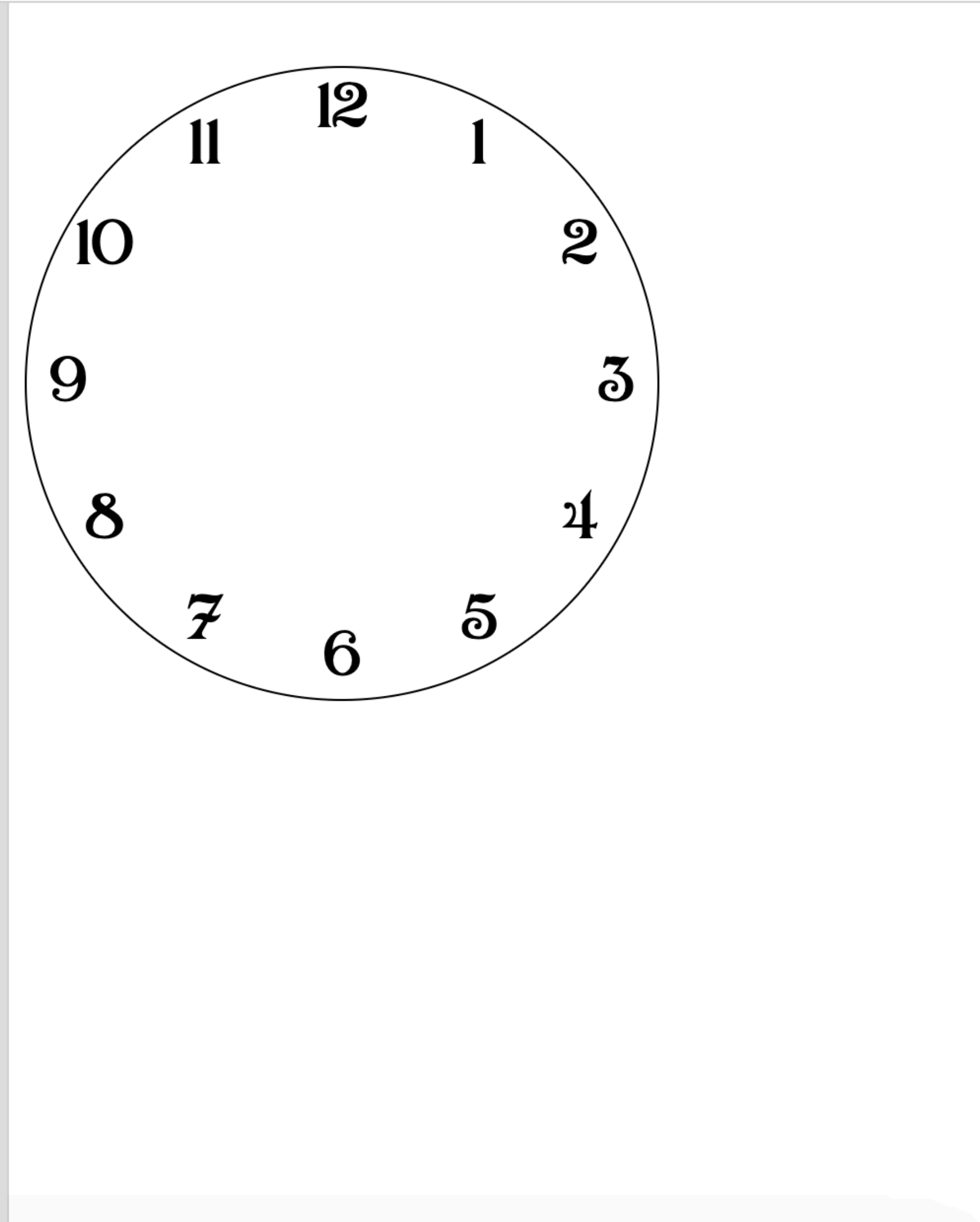


$$x = r \sin \psi$$

$$y = -r \cos \psi$$

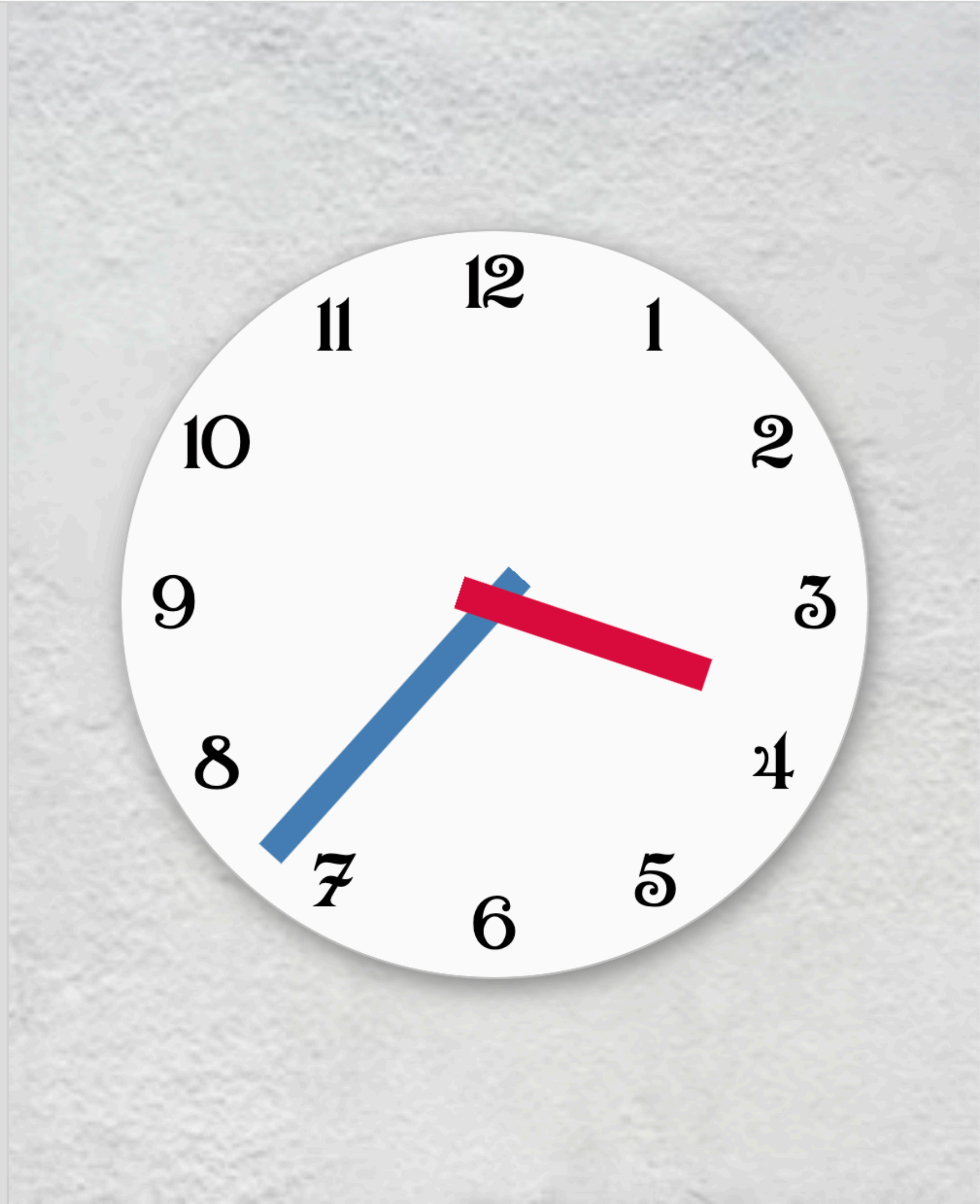


```
HTML
CSS
26
27 li {
28   grid-area: 1 / 1;
29   --angle: calc(var(--index)/var(--count) * 1turn);
30   align-self: center;
31   translate: calc(4.35em * sin(var(--angle))) calc(-4.35em * cos(var(--
32   angle)));
33
34 li:nth-of-type(1) { --index: 1 }
35 li:nth-of-type(2) { --index: 2 }
36 li:nth-of-type(3) { --index: 3 }
37 li:nth-of-type(4) { --index: 4 }
38 li:nth-of-type(5) { --index: 5 }
39 li:nth-of-type(6) { --index: 6 }
40 li:nth-of-type(7) { --index: 7 }
41 li:nth-of-type(8) { --index: 8 }
42 li:nth-of-type(9) { --index: 9 }
43 li:nth-of-type(10) { --index: 10 }
```





```
HTML
CSS (SCSS)
1 * { box-sizing: border-box }
2
3 body {
4   margin: 0;
5   min-height: 100vh;
6   display: grid;
7   place-items: center;
8   background: url(https://images.unsplash.com/photo-1533628635777-112b2239b1c7?auto=format&fit=crop&q=80&w=500&ixlib=rb-4.0.3&ixid=M3wxMjA3fDB8MHxwaG90by1wYWdlfHx8fGVufDB8fHx8fA%3D%3D) center/cover; /* background image by thomas heintz on Unsplash */
9 }
10
11 .clock {
12   container-type: inline-size;
13   margin: auto;
14   padding: 0;
15   aspect-ratio: 1;
```





```
HTML
CSS (SCSS)
JS
6
7 clockElement.setTime = function() {
8   window.requestAnimationFrame(() => {
9     const now = new Date();
10    clockElement.style.setProperty('--hours', now.getHours());
11    clockElement.style.setProperty('--minutes', now.getMinutes());
12    clockElement.style.setProperty('--seconds', now.getSeconds() +
now.getMilliseconds()/1000);
13  });
14 }
15
16 clockElement.setTime();
17 window.setInterval(clockElement.setTime, refresh);
18
19 // :has() polyfill
20 if (!CSS.supports('selector(&:has(li:nth-of-type(1)))')) {
21   const setCount = (element) => {
22     element.style.setProperty('--count', element.childElementCount);
23   }:
```



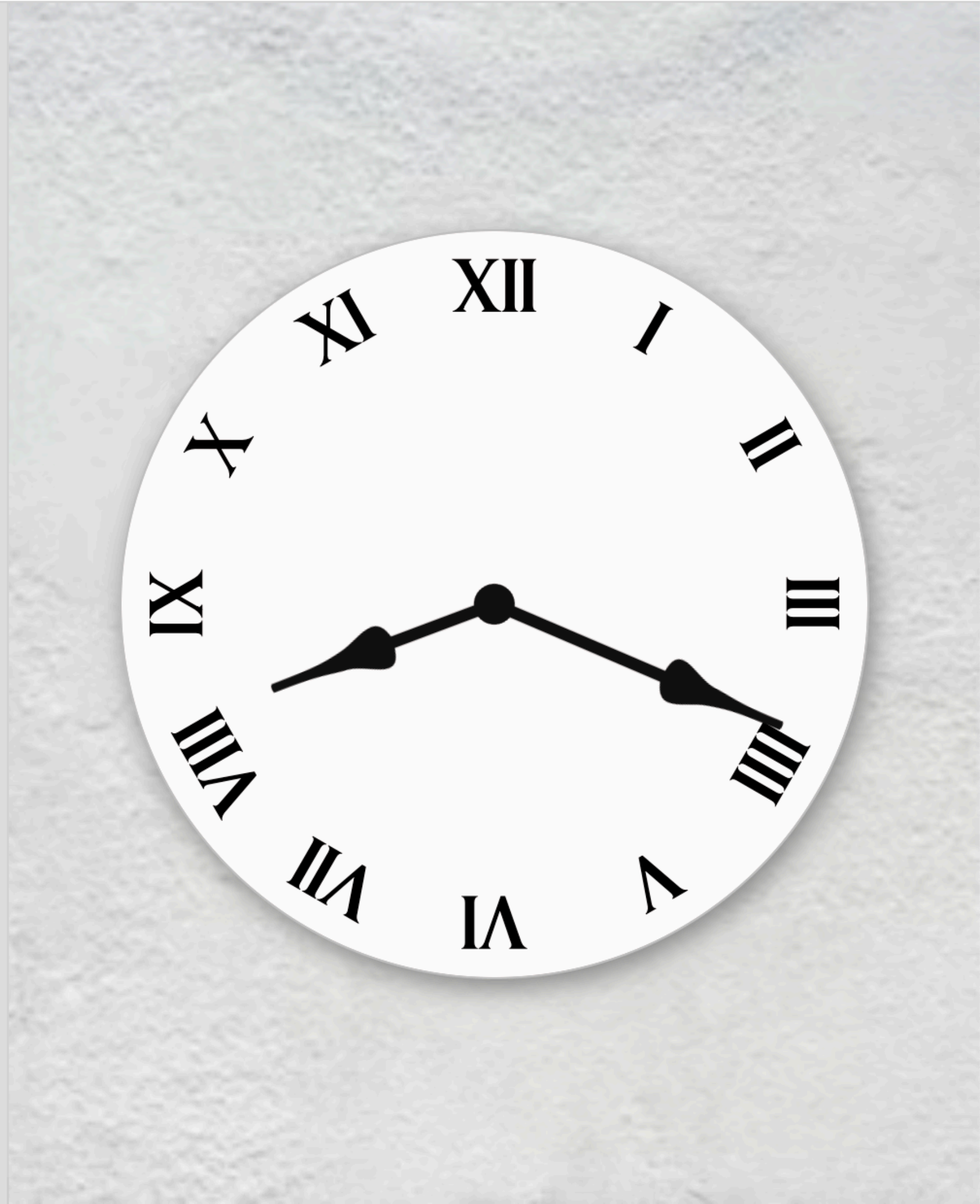


# CSS clock, vintage, Roman numerals

Gunnar Bittersmann

♥ Save Settings [Grid Icon] [Pin Icon] [Profile Icon]

```
HTML
CSS (SCSS)
17
18 .clock {
19   --style: upper-roman--iiii;
20   container-type: inline-size;
21   margin: auto;
22   padding: 0;
23   aspect-ratio: 1;
24   width: clamp(8em, 80vmin, 24em);
25   border-radius: 50%;
26   background: snow;
27   outline: thin solid silver;
28   box-shadow: .5vmin 1vmin 3vmin gray;
29   display: grid;
30   list-style: var(--style) inside;
31   justify-items: center;
32   --partOfMinute: calc(var(--seconds)/60);
33   --partOfHour: calc((var(--minutes) + var(--partOfMinute))/60);
34
35 &::before, &::after {
```





```
24
25 @media (min-width: 20em) {
26   img {
27     width: min(10em, 40vw);
28     float: left;
29     shape-outside: ellipse(63% 51% at 37% 47%);
30     margin: 0 1em 0 -1em;
31   }
32 }
33
```

# SAVE THE CLOCK TOWER



The clock tower was struck by lightning during an electrical storm on November 12, 1955. This fused the clock's internal mechanism and had stopped the clock at 10:04 pm permanently. Despite efforts trying to repair or replace the damaged clockwork, the Hill Valley Preservation Society kept it in this condition as part of the town's history and heritage. Though the courthouse's lightning rod could provide sufficient electrical grounding to absorb lightning strikes, it had completely severed. Originally, the tower was simply struck by lightning and the clock rendered useless, but after Marty visited 1955, an experiment involving hooking a cable up to the antenna was created by Doc to send Marty back to the future.



```
14  
15 .clock {  
16   container-type: inline-size;  
17   margin: auto;  
18   padding: 0;  
19   aspect-ratio: 1;  
20   width: 100%;  
21   border-radius: 50%;  
22   background: snow;  
23   outline: thin solid silver;  
24   box-shadow: .5vmin 1vmin 3vmin gray;  
25   display: grid;  
26   list-style: none;  
27   justify-items: center;  
28   --partOfMinute: calc(var(--  
29     seconds)/60);  
30   --partOfHour: calc((var(--minutes) +  
31     var(--partOfMinute))/60);
```





```
HTML
CSS (SCSS)
37 &::after {
38   background: linear-gradient(
39     transparent 0 5%,
40     #111 0 55%,
41     transparent 0
42   );
43   width: 4cqw;
44   rotate: calc(var(--partOfHour) * 1turn);
45   transition: rotate linear calc(var(--refresh, 0) * 1ms/2);
46 }
47
48 &::before {
49   background: linear-gradient(
50     transparent 0 20%,
51     #111 0 55%,
52     transparent 0
53   );
54   width: 4.5cqw;
55   rotate: calc((var(--hours) + var(--partOfHour))/12 * 1turn);
JS
```





# THE CUCKOO-CLOCK INCIDENT

presented by GUNNAR BITTERSMAANN

Black Forest photos by GUNNAR BITTERSMAANN





```
HTML
CSS (SCSS)
JS

1 const audioElement = new Audio("https://bittersmann.de/talks/assets/kuckuck.mp3");
2
3 const clockElement = document.querySelector('.clock');
4 const refresh = 500; // ms
5 if (refresh > 750) {
6   clockElement.style.setProperty('--refresh', refresh);
7 }
8
9 clockElement.strike = function (number) {
10  const strikeOnce = () => {
11    audioElement.play();
12    number--;
13
14    if (number == 0) {
15      audioElement.removeEventListener('ended', strikeOnce);
16    }
17  };
18 }
```

