

SVG i SVG animacije u web developmentu

SVG?

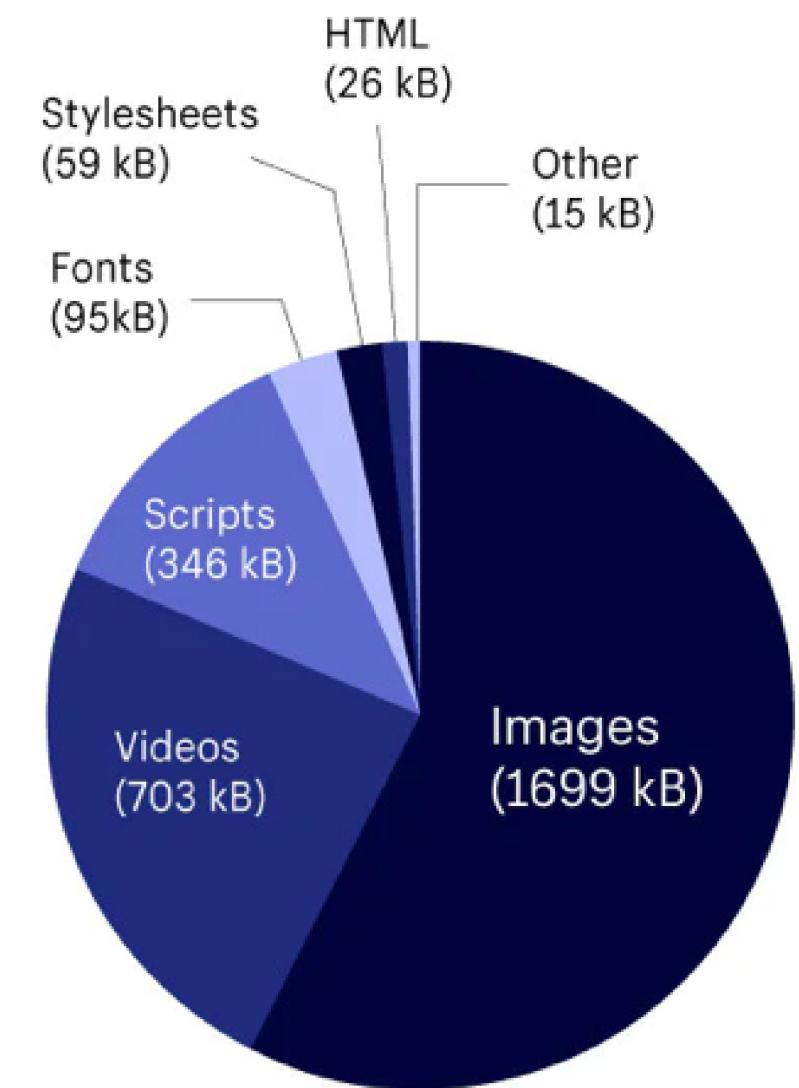
SVG animacije

- SVG elementi za animiranje
- web alati (CSS, JS)

Prednosti

- dobra podržanost
- mala veličina

Average bytes per page by content type

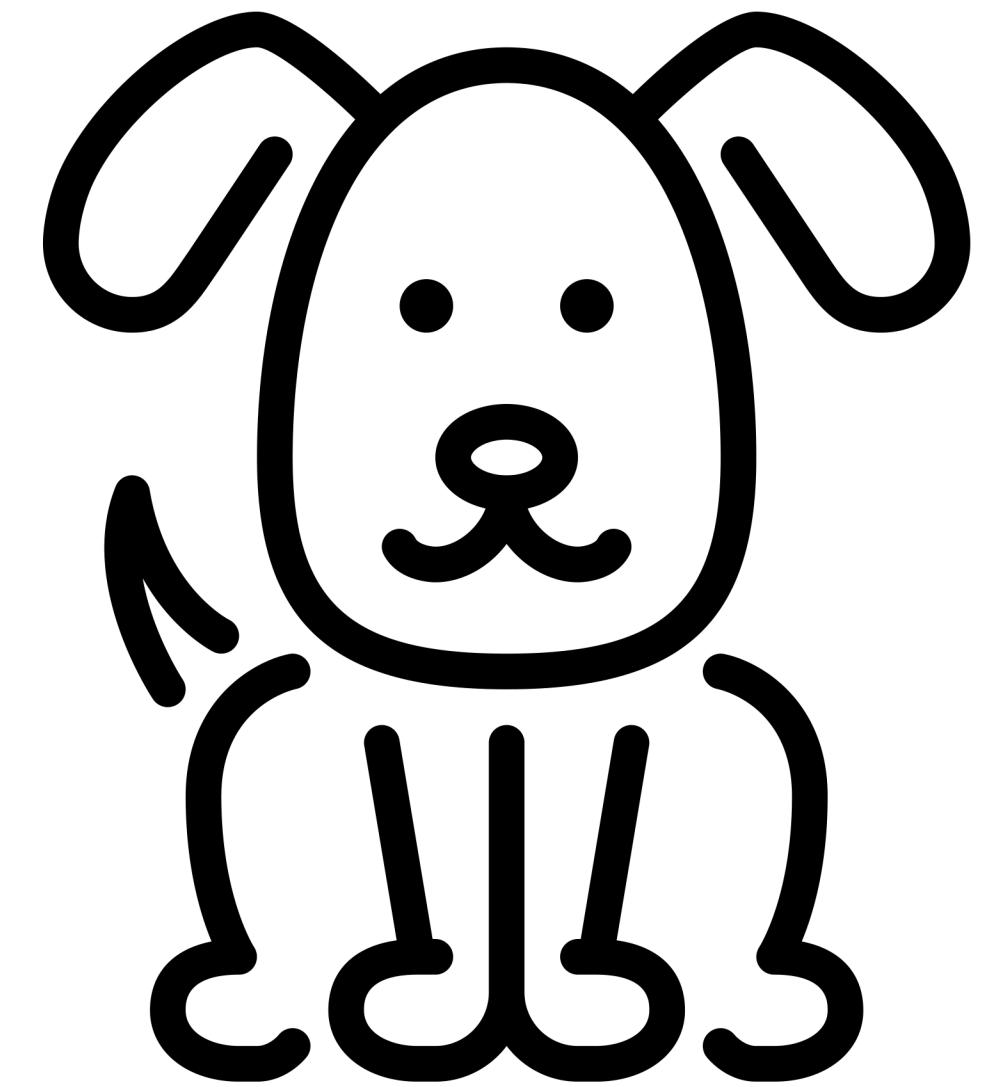


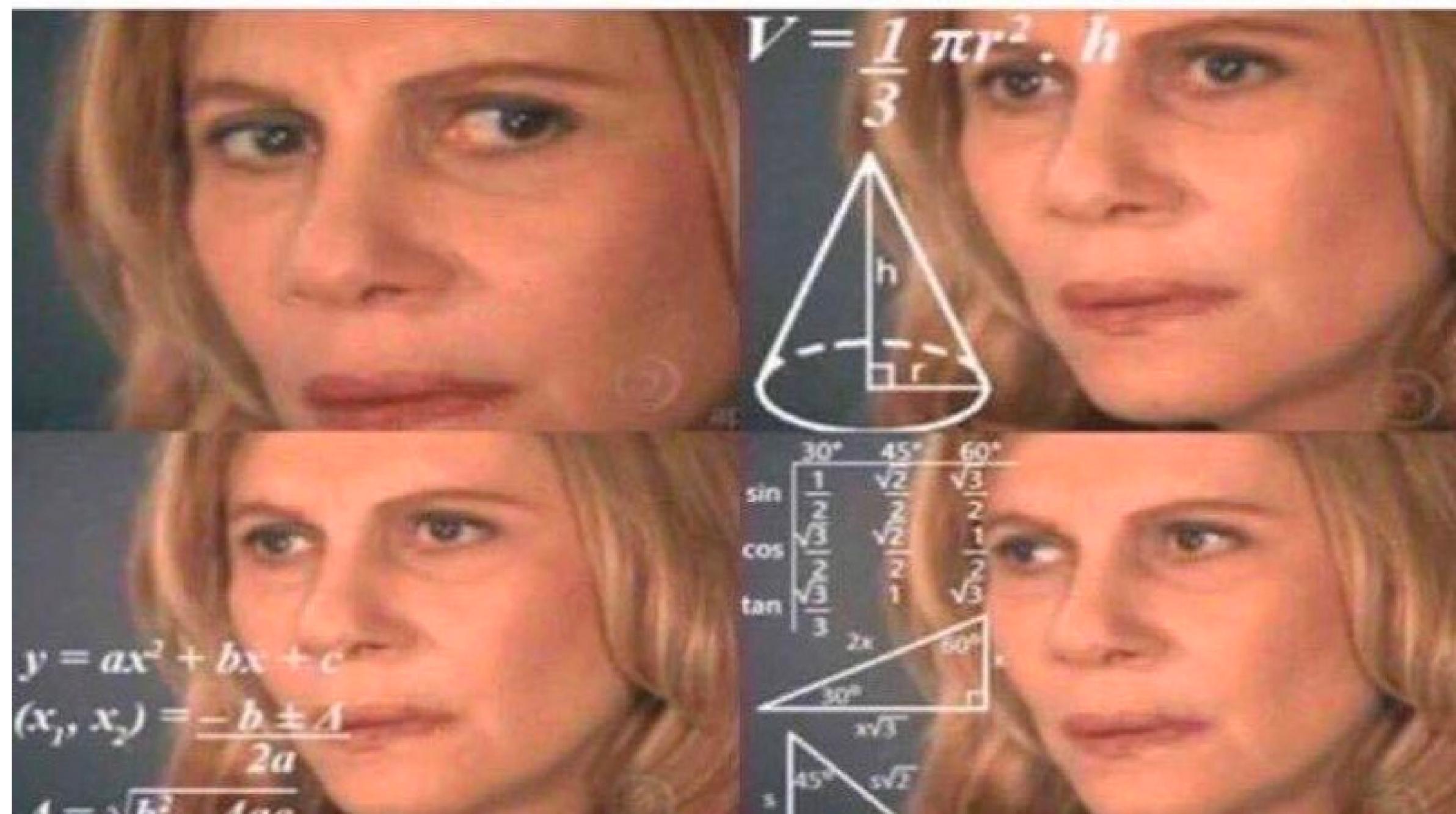
Prednosti

- dobra podržanost
- mala veličina
(optimizacija!)
- DOM sličan HTML-u

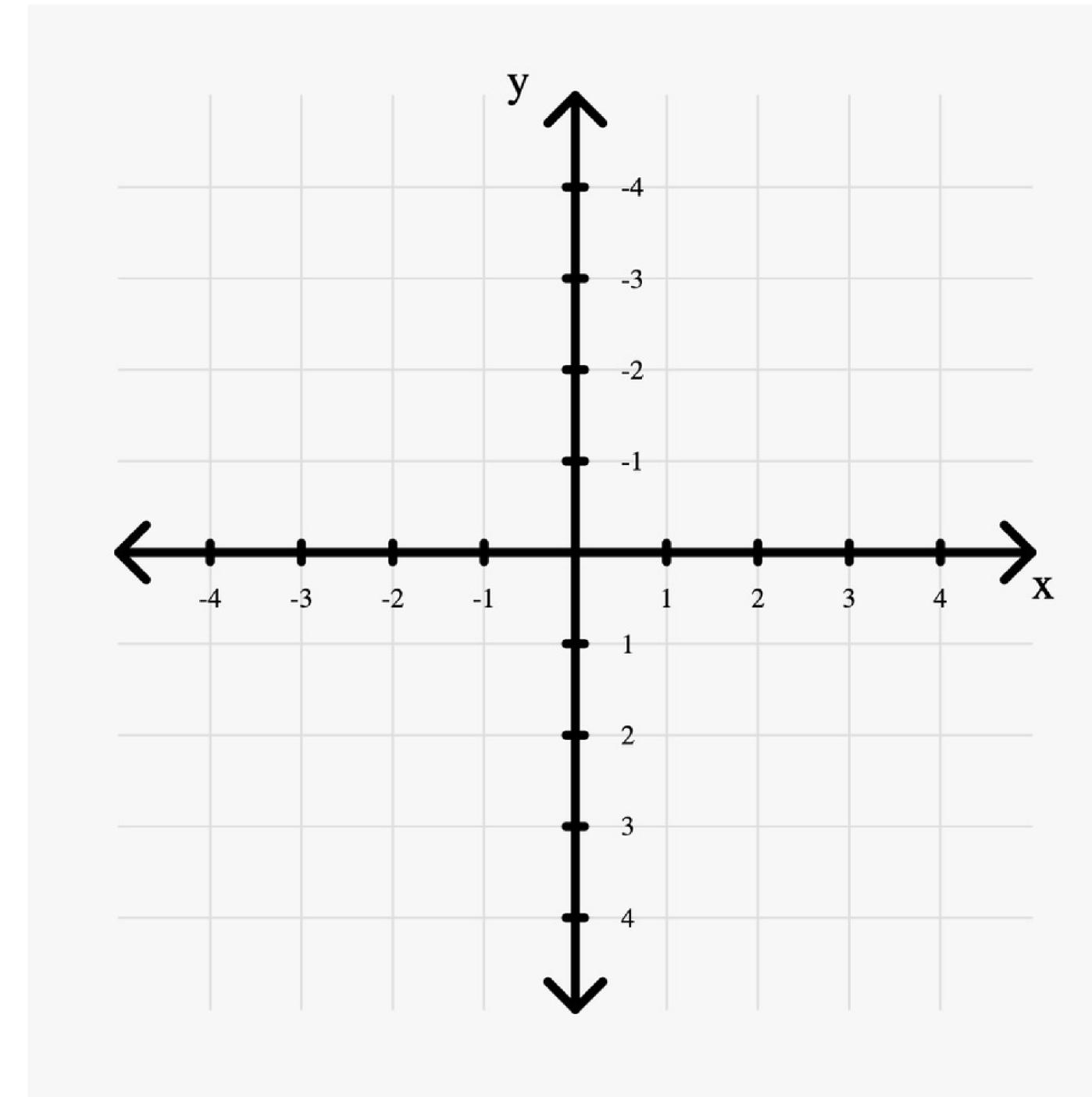
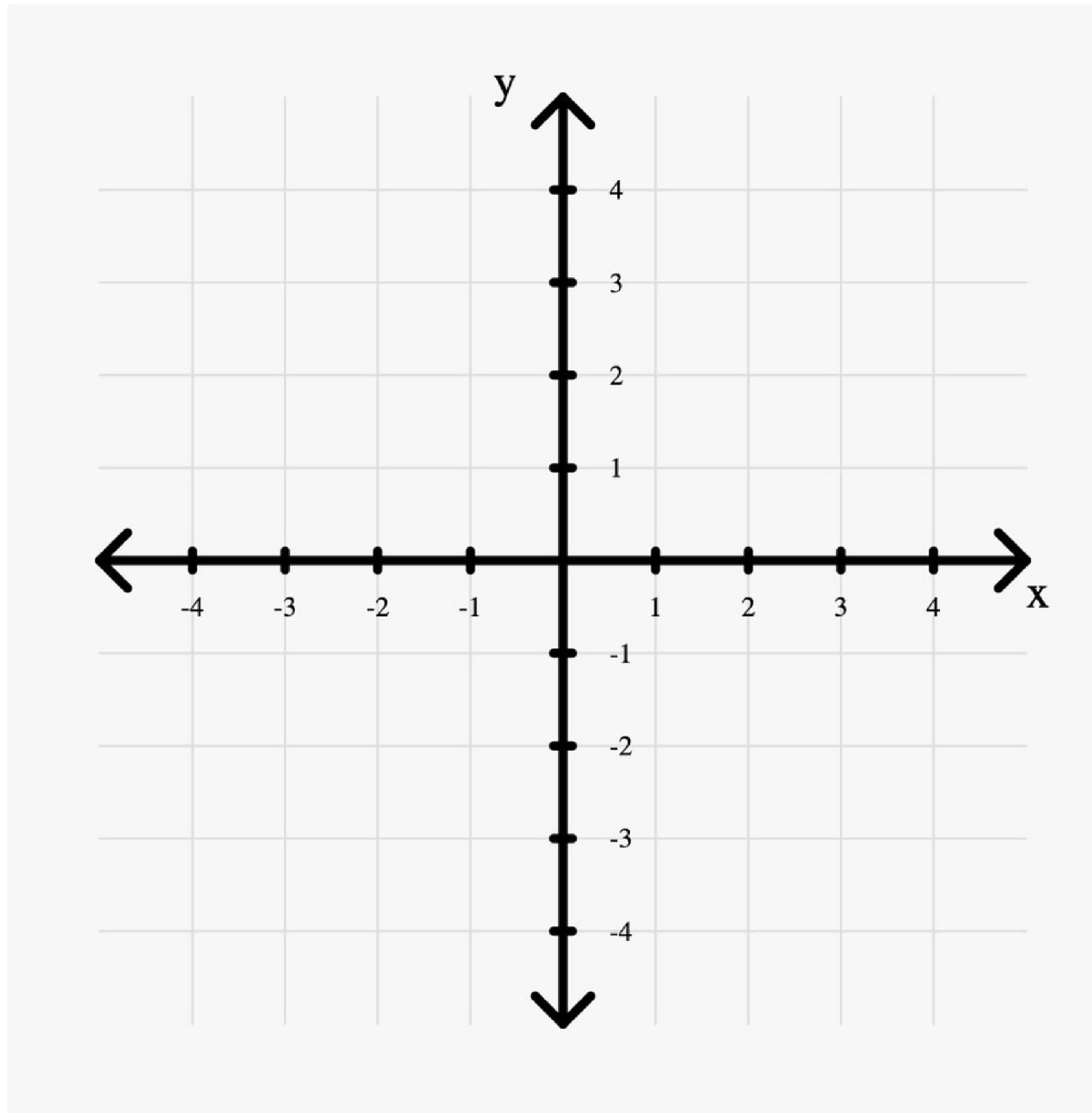
Loaderi

- <https://cdn.svgator.com/images/2021/08/css-loader-preloader-paint-roll.svg>
- <https://cdn.svgator.com/images/2021/08/loading-animation-css-example.svg>
- <https://codepen.io/motionimaging/pen/RGQPJY>

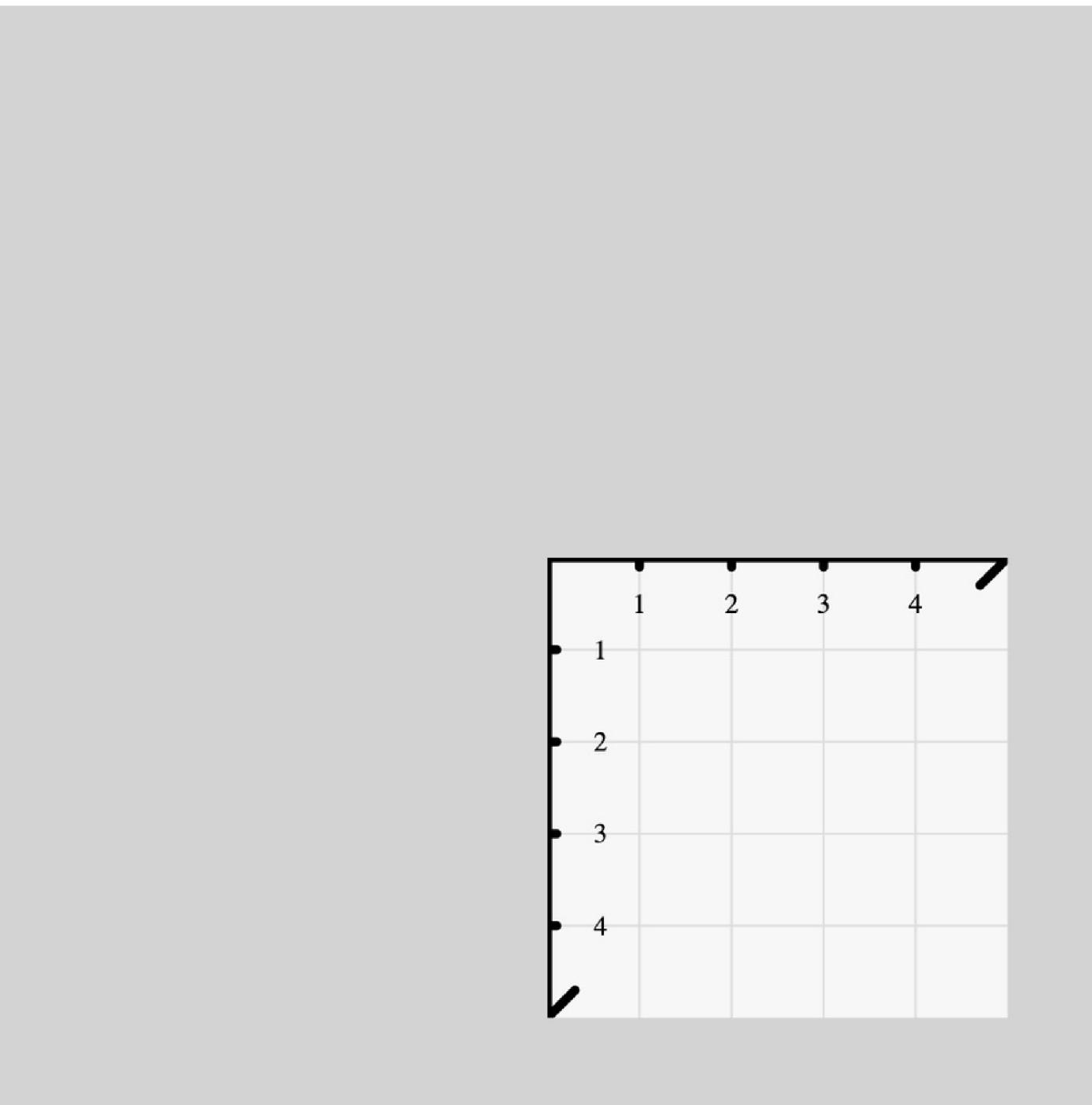




Koordinatni sustav



Viewbox



viewBox="0 0 5 5"

<svg>



</svg>

```
<svg xmlns="http://www.w3.org/2000/svg" version="1.1">
```

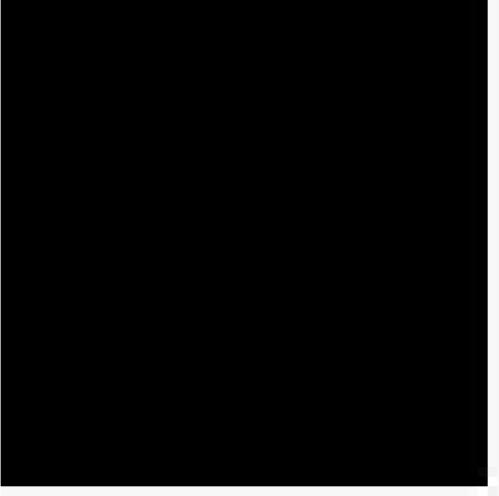


```
</svg>
```

```
<svg xmlns="http://www.w3.org/2000/svg" version="1.1"  
viewBox="0 0 100 100" width="100" height="100">
```



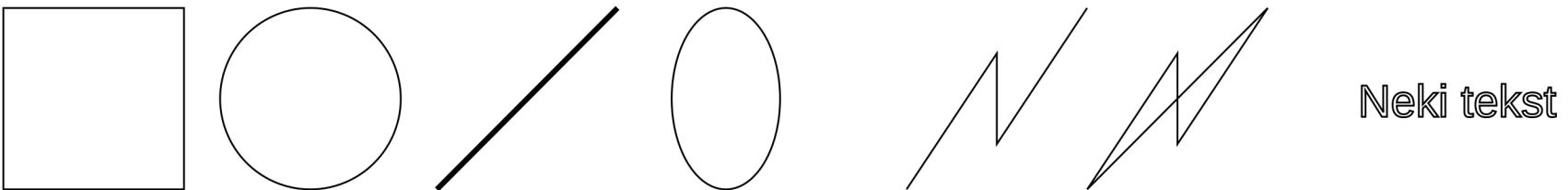
```
</svg>
```



```
<svg xmlns="http://www.w3.org/2000/svg" version="1.1"
viewBox="0 0 100 100" width="100" height="100">
<rect width="50" height="50" />
</svg>
```

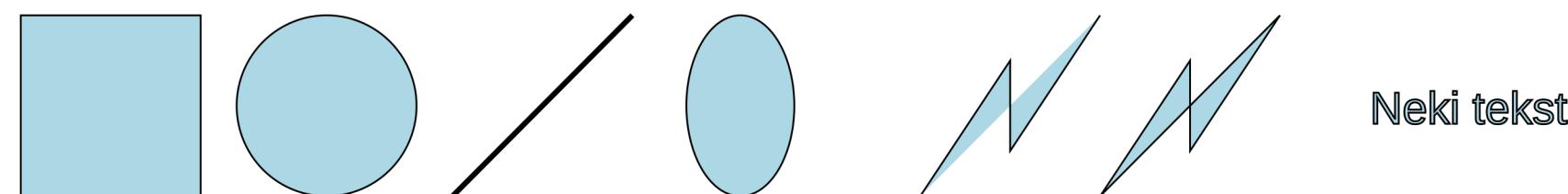
Različiti elementi kao različiti HTML tagovi

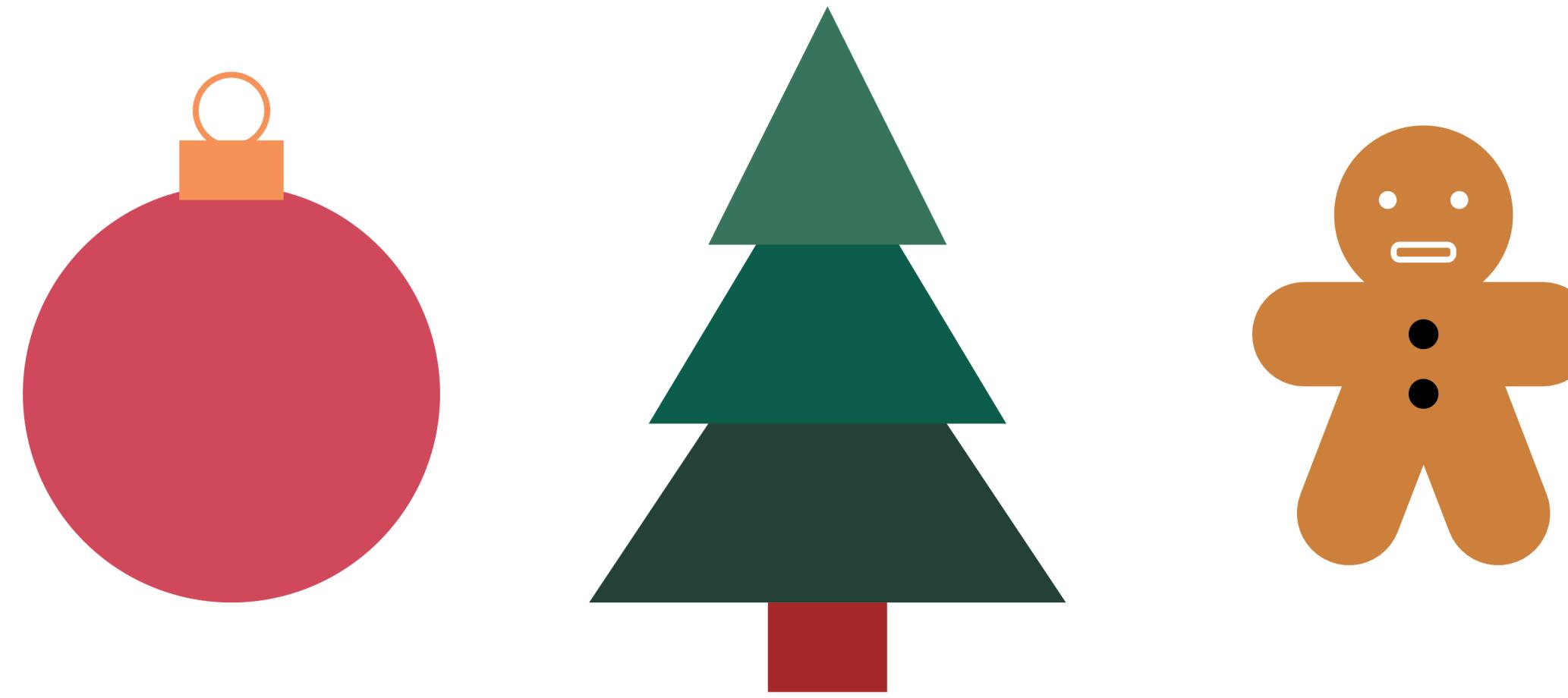
```
<rect x="0" y="0" width="100" height="100" />
<circle cx="50" cy="50" r="50" />
<line x1="0" y1="80" x2="100" y2="20" />
<ellipse cx="100" cy="50" rx="50" ry="100" />
<polyline points="100,100 150,25 150,75 200,0" />
<polygon points="100,100 150,25 150,75 200,0" />
<text x="20" y="35">Neki tekst</text>
```



Stroke i fill

```
<rect x="0" y="0" width="100" height="100" stroke="black" fill="blue" />
<circle cx="50" cy="50" r="50" stroke="black" fill="blue"/>
<line x1="0" y1="80" x2="100" y2="20" stroke="black" fill="blue"/>
<ellipse cx="100" cy="50" rx="100" ry="50" stroke="black" fill="blue"/>
<polyline points="100,100 150,25 150,75 200,0" stroke="black" fill="blue"/>
<polygon points="100,100 150,25 150,75 200,0" stroke="black" fill="blue"/>
<text x="20" y="35" stroke="black" fill="blue">Neki tekst</text>
```





stroke-width="2"
stroke-linecap="round"(line)
rx="2" (rect)

Path



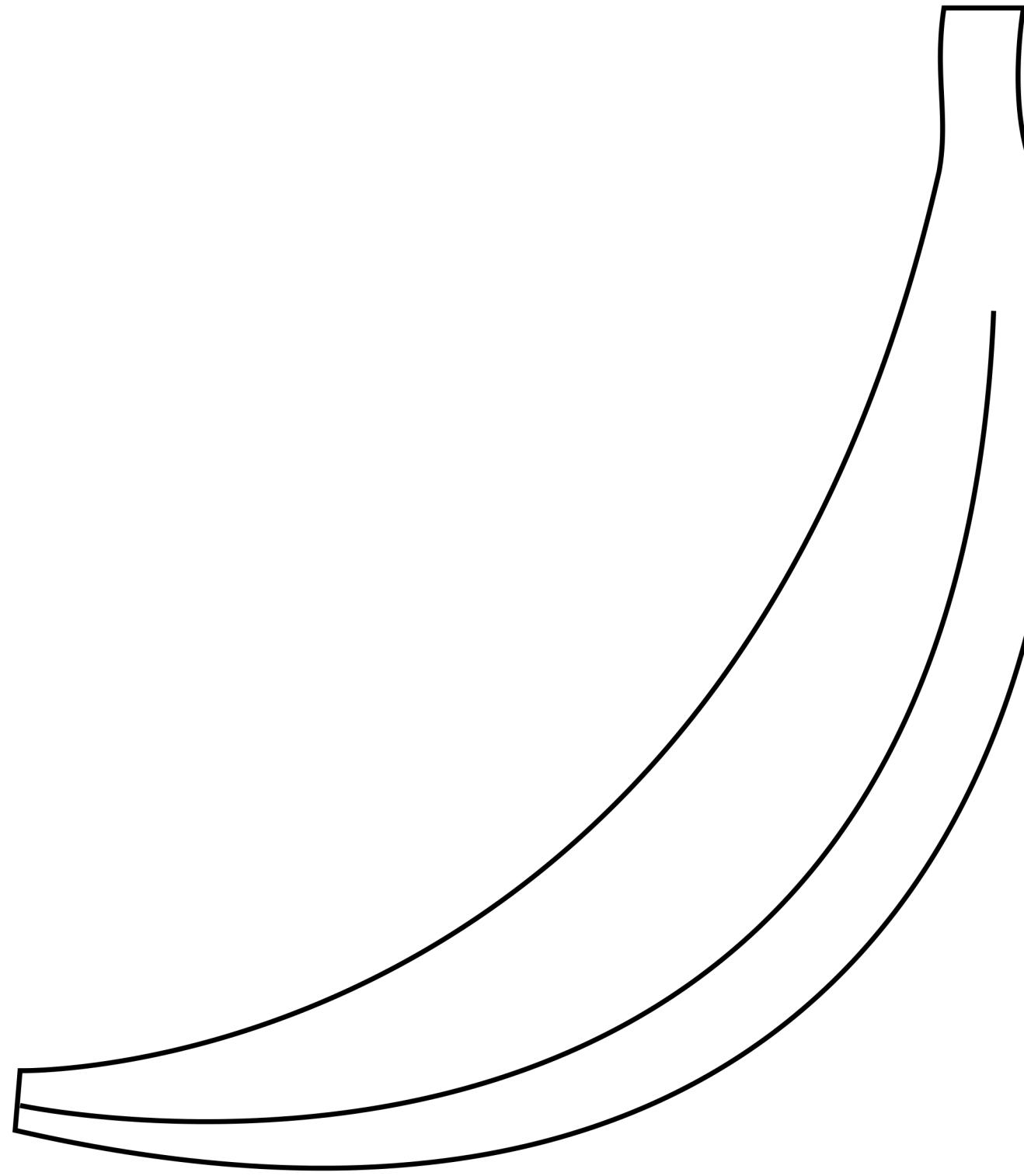
<path d="..."/>



Micanje

Linija

Krivulje



```
<path d="M 8,223 c 0,0 143,3 185,-181 c 2,-11 -1,-20 1,-33 h 16 c 0,0 -3,17 1,30 c 21,68 -4,242 -204,196 L 8,223 M 8,230 c 0,0 188,40 196,-160" />
```

Path

Micanje

M

m

Linija

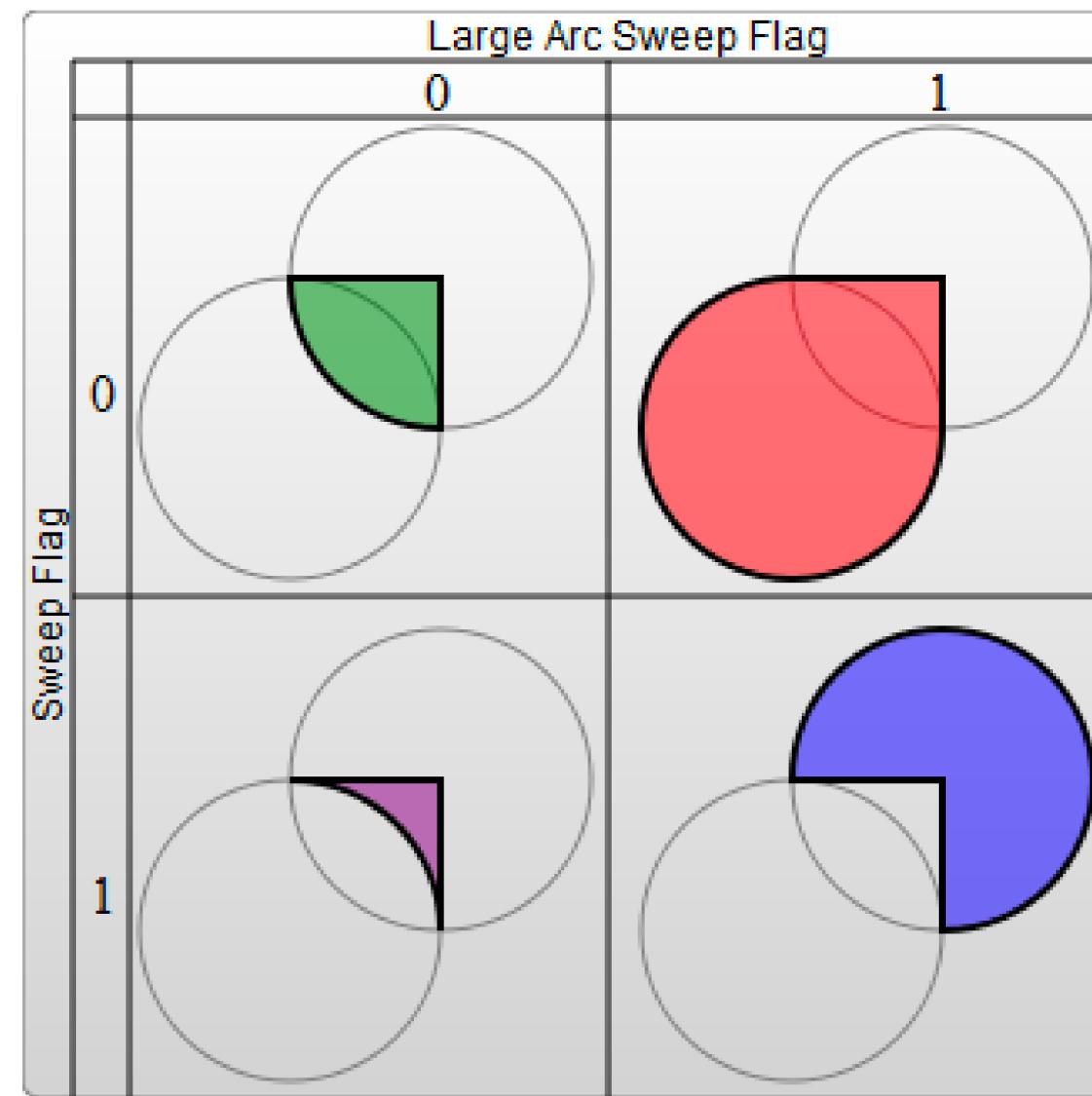
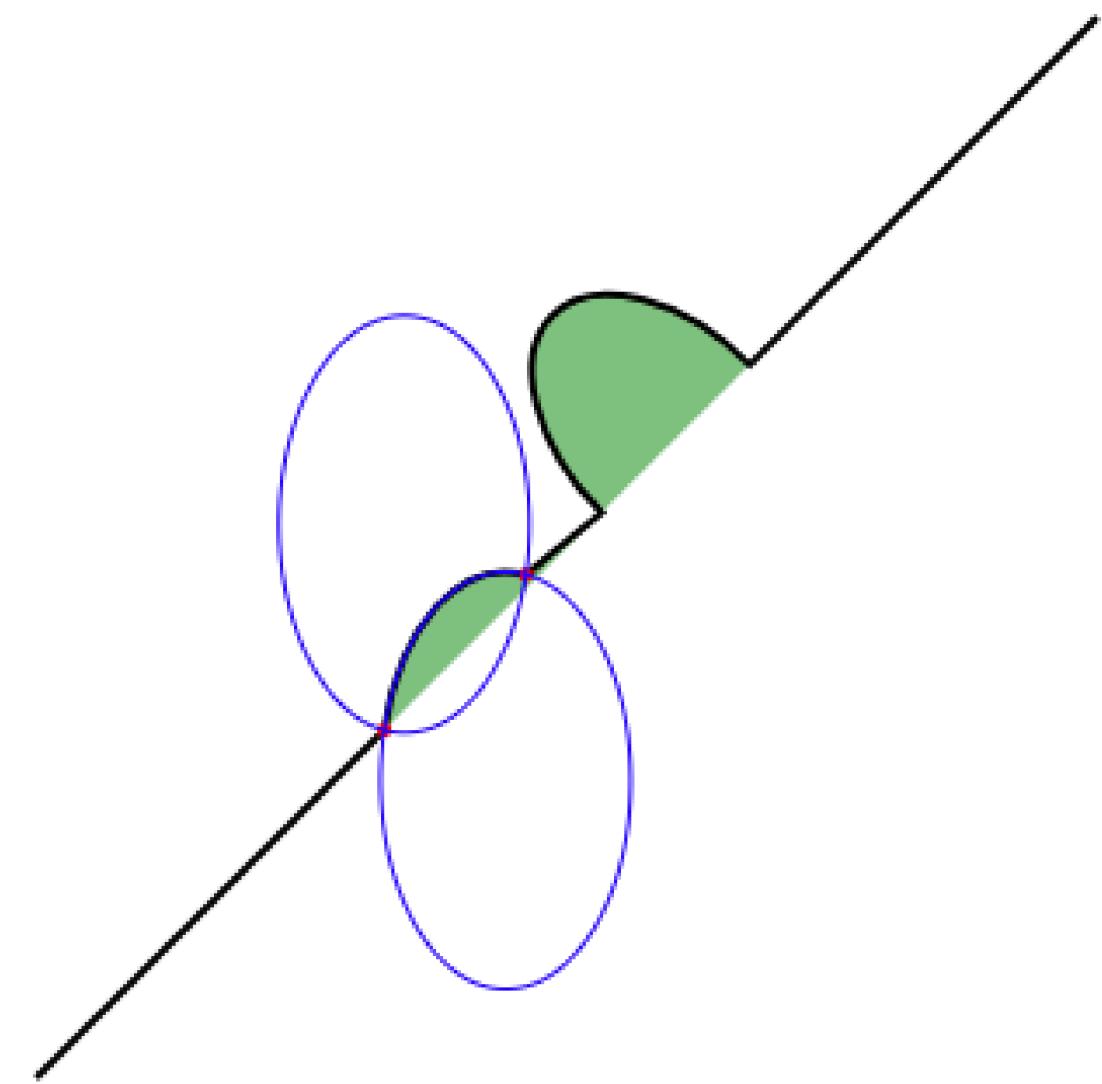
L, H, V, Z

l, h, v, z

Krivulje

C, (S), Q, (T), A

c, (s), q, (t), a



M x,y - micanje do x,y bez crtanja

L x,y - linija do x,y

H x - horizontalna linija do x

V y - vertikalna linija do y

Z - ravna crta zatvaranja (do početka)

Q kontrolniX, kontrolniY x,y - krivulja do x,y

C kontrolniX1,kontrolniY1 kontrolniX2, kontrolniY2 x,y - krivulja do x,y

A radiusX, radiusY rotacija jeLiVelikiLuk jeLiUSmjeruKazaljkeNaSatu x y - luk
do x,y

Dash linearray & offset

... ili kad SVG crta sam sebe

Animate & AnimateMotion

Animirani checkbox

Text

color & opacity

color: #131311
opacity: 1

color: grey
opacity: 0.6

Box

stroke-dashoffset

stroke-dasharray: 56.1053
stroke-dashoffset: 0

stroke-dashoffset: 56.1053

Check

stroke-dashoffset

stroke-dasharray: 9.8995
stroke-dashoffset: 9.8995

stroke-dashoffset: 0

Line

stroke-dashoffset
& stroke

stroke-dasharray: 168
stroke-dashoffset: 168
stroke: #3cb5e5

stroke-dashoffset: -8
stroke: #7ed361

& tranzicija

Pattern:

<https://codepen.io/asraven/details/dGQEKe>

Gradient:

<https://codepen.io/yoksel/pen/RaXway>

Filteri:

<https://blog.logrocket.com/complete-guide-using-css-filters-svgs/>

Text path:

<https://codepen.io/GreenSock/pen/qBXdywG>

<https://codepen.io/nikantic/pen/QWyXBWJ>

<https://codepen.io/Ambervein/pen/qBWXjjj>