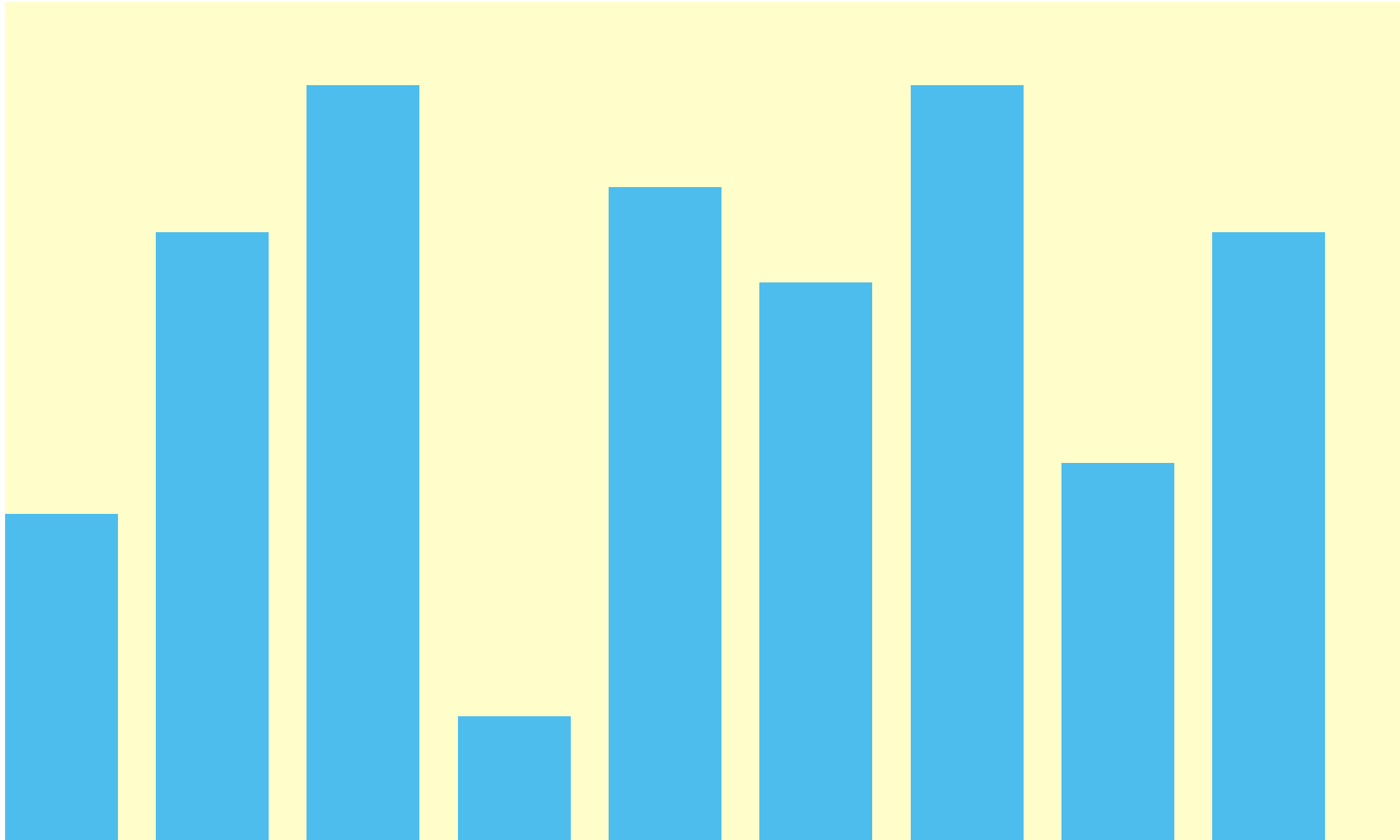
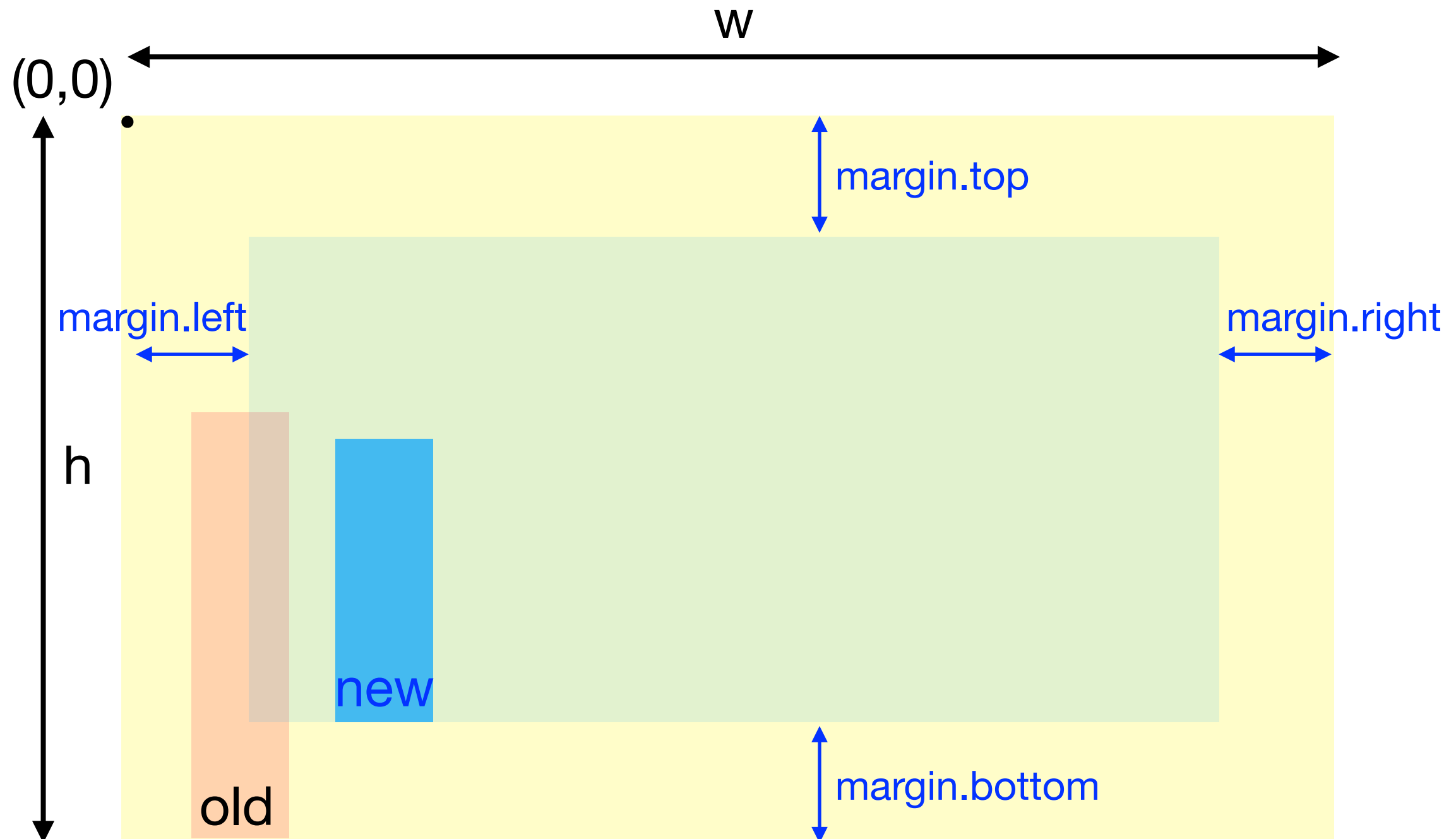


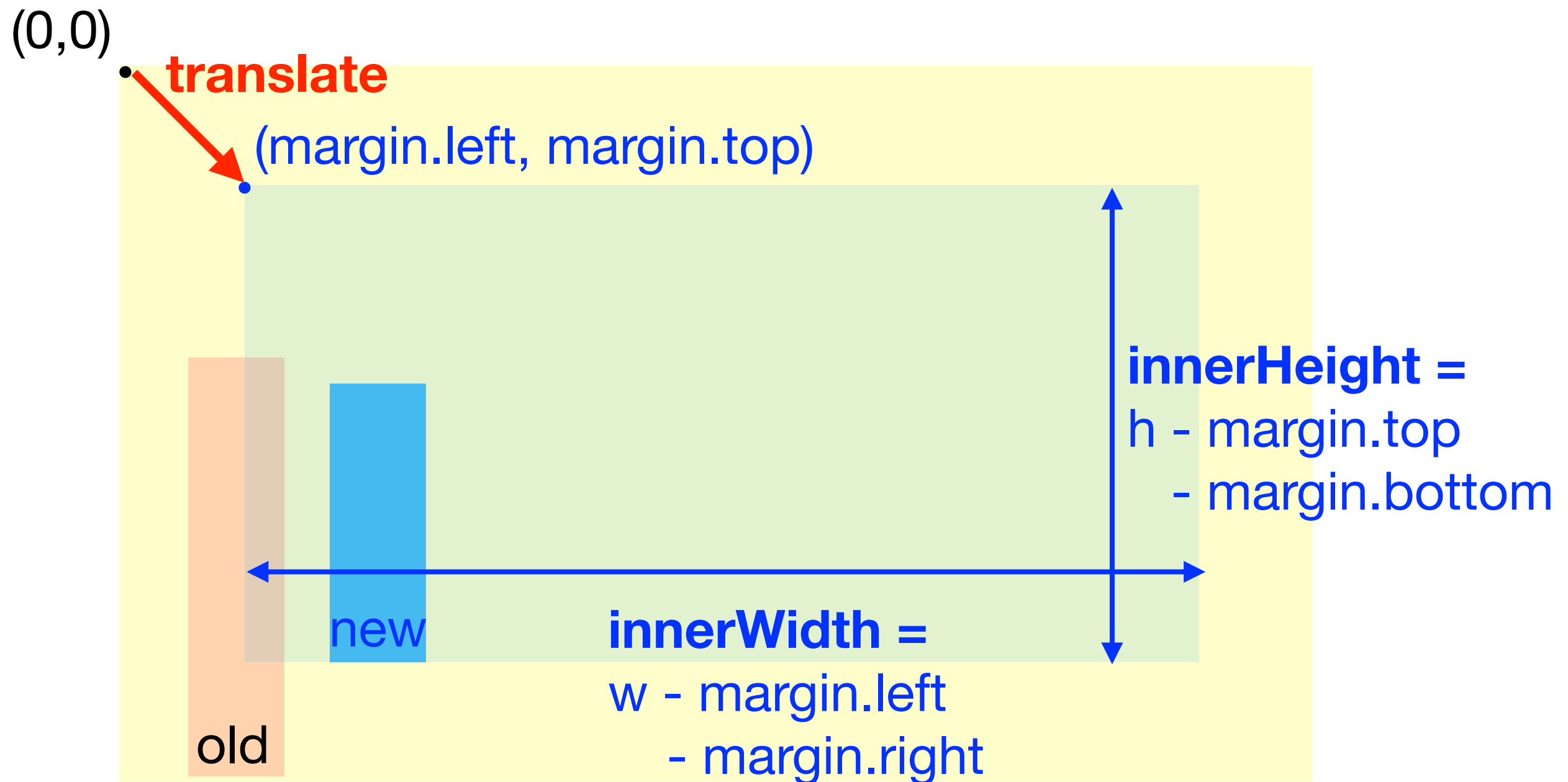
Axes need space



Margin convention



Margin convention



Add background rectangle

```
svg.append("rect")  
  .attr("x", 0)  
  .attr("y", 0)  
  .attr("width", w)  
  .attr("height", h)  
  .attr("fill", "lightblue");
```

Groups

```
const bars = svg.append("g")  
  .selectAll("rect").data(bardata)  
  .enter().append("rect");
```

before

```
<svg>  
  <rect> ... </rect>  
  <rect> ... </rect>  
  <rect> ... </rect>  
</svg>
```

after

```
<svg>  
  <g>  
    <rect> ... </rect>  
    <rect> ... </rect>  
    <rect> ... </rect>  
  </g>  
</svg>
```

Groups

```
<svg>
```

```
<rect> ... </rect>
```

```
<g>
```

```
<rect> ... </rect>
```

```
<rect> ... </rect>
```

```
<rect> ... </rect>
```

```
</g>
```

```
</svg>
```

svg.select("rect")

**svg.select("g")
.selectAll("rect")**

Groups

add an id

```
const bars = svg.append("g")  
  .attr("id", "plot")  
  .selectAll("rect")  
  .data(bardata);
```

<g id="plot">

Groups

translate

```
const bars = svg.append("g")
    .attr("transform",
        `translate (${margin.left},
                    ${margin.top})`)
    .selectAll("rect")
    .data(bardata);
```

<g transform="translate (25, 25)">

ES6 template literals, use ``

```
const bars = svg.append("g")  
  .attr("transform",  
    `translate (${margin.left},  
    ${margin.top})`)  
  .selectAll("rect")  
  .data(bardata);
```

OR

```
"translate (" + margin.left + ", "  
  + margin.top + ")")
```