Scales

Ordinal scales

```
var ordscale = d3.scaleBand()
      .domain(["cold", "warm", "hot"])
      .range([0, 500]);
```

```
> ordscale("cold");
0
> ordscale("warm");
166.66666666666666
> ordscale("hot");
333.3333333333333
```

d3.range( ) .length

```
var ordscale = d3.scaleBand()
    .domain([0, 1, 2, 3, 4])
    .range([0, 500]);
```

`d3.range(5)` *returns* `[0, 1, 2, 3, 4]`

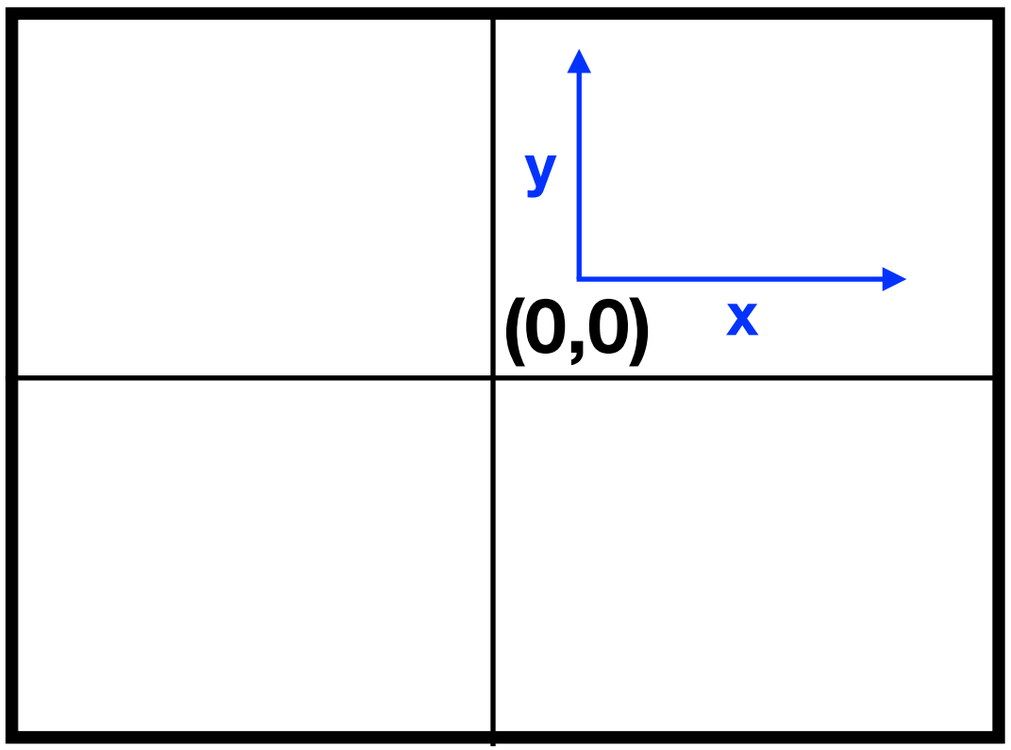
```
    .domain(d3.range(dataset.length))
```

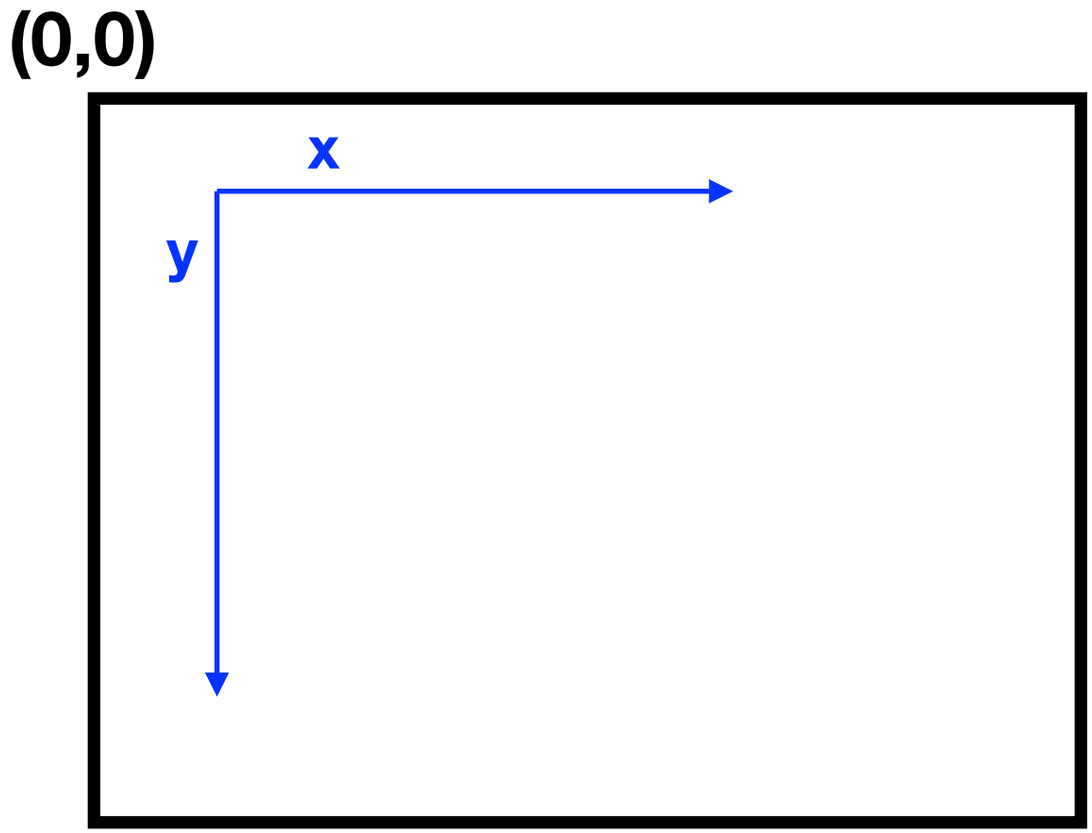
EDAV5_4_scaleBand.html

ordinal scale
for x-axis

Cartesian Coordinates

SVG





X

Dealing with negative values

```
d3.scaleLinear()
.domain([-100, 100])
.range([0, 500])
```

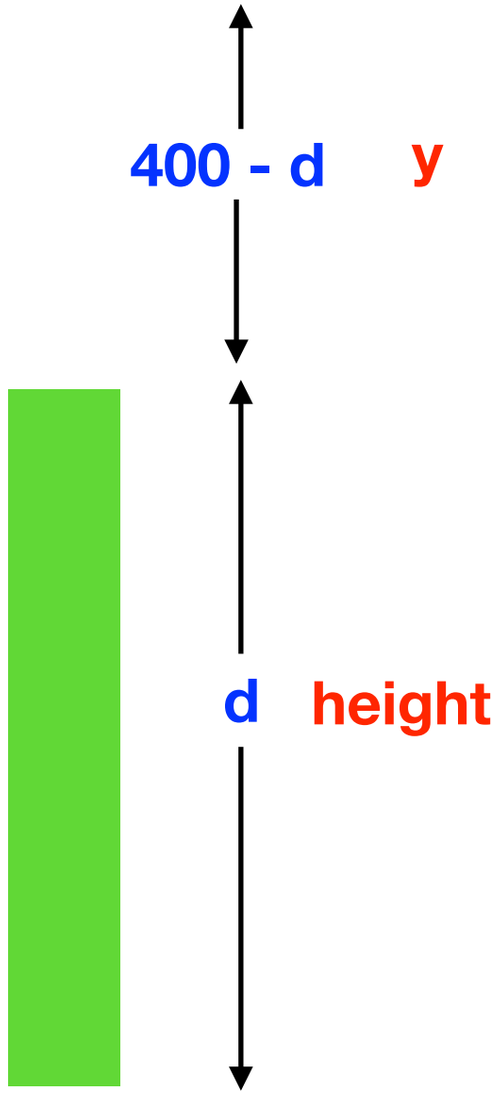
y

so far...

```
.attr("height", d => d)
```

```
.attr("y", d => 400 - d)
```

1. the data (d) is the bar height
2. y is the gap on top
3. y + bar height = svg height
4. conceptual leap: y starts at the top

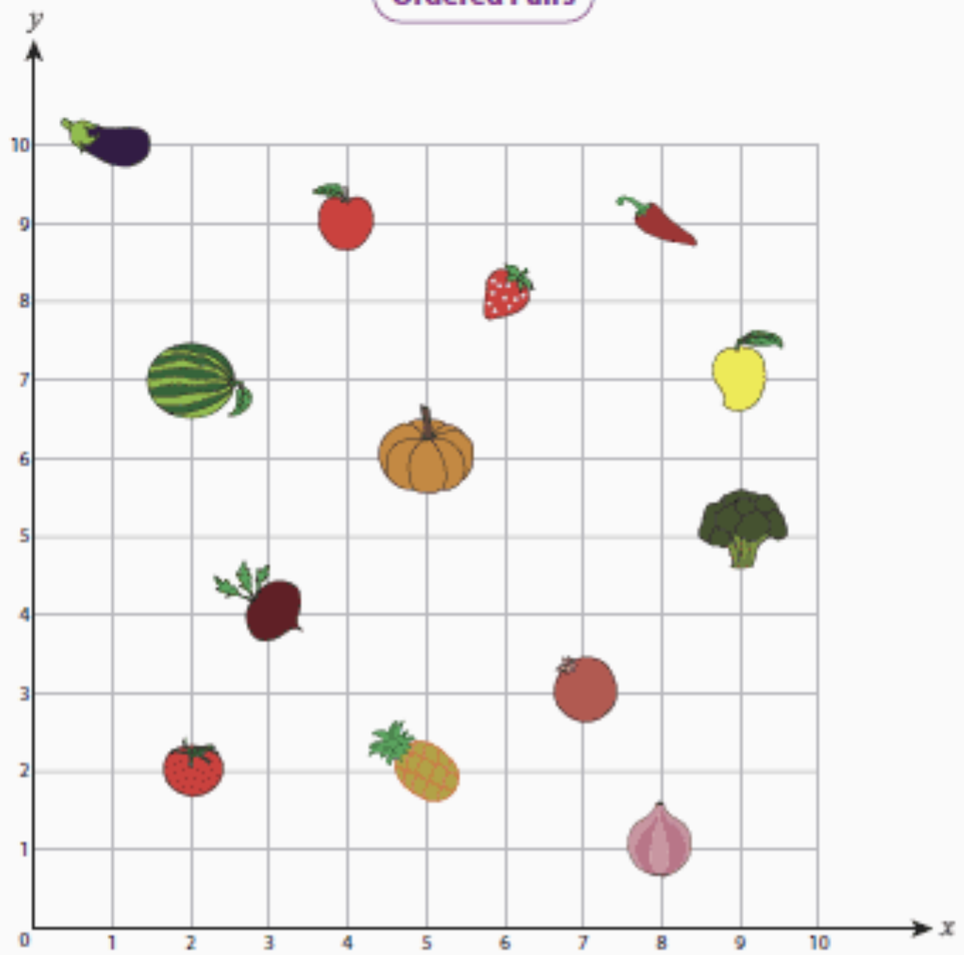


https://www.worldmapstore.com/product/home-decor/usa-upside-down-map/

https://fineartamerica.com/featured/world-map-upside-down-jazzberry-blue.html

Name : _____ Score : _____

Ordered Pairs



A) Write the ordered pair for each item.

1)  _____

2)  _____

3)  _____

4)  _____

5)  _____

B) Write the item located at each ordered pair.

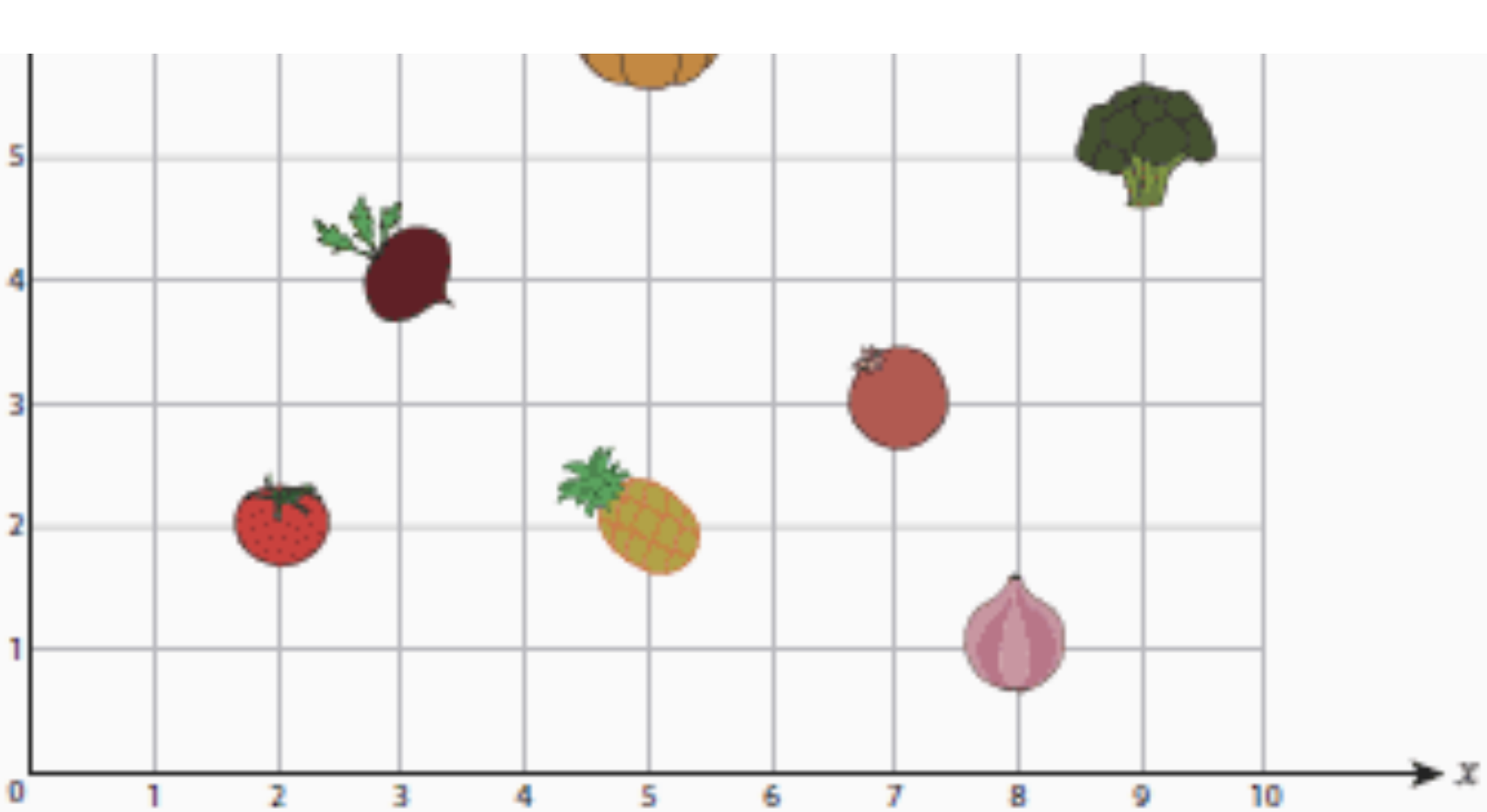
6) (2, 2) _____

7) (9, 7) _____

8) (2, 7) _____

9) (3, 4) _____

10) (7, 3) _____



A) Write the ordered pair for each item.

1)  _____

2)  _____

B) Write the item located at each ordered pair.

6) (2, 2) _____

7) (9, 7) _____

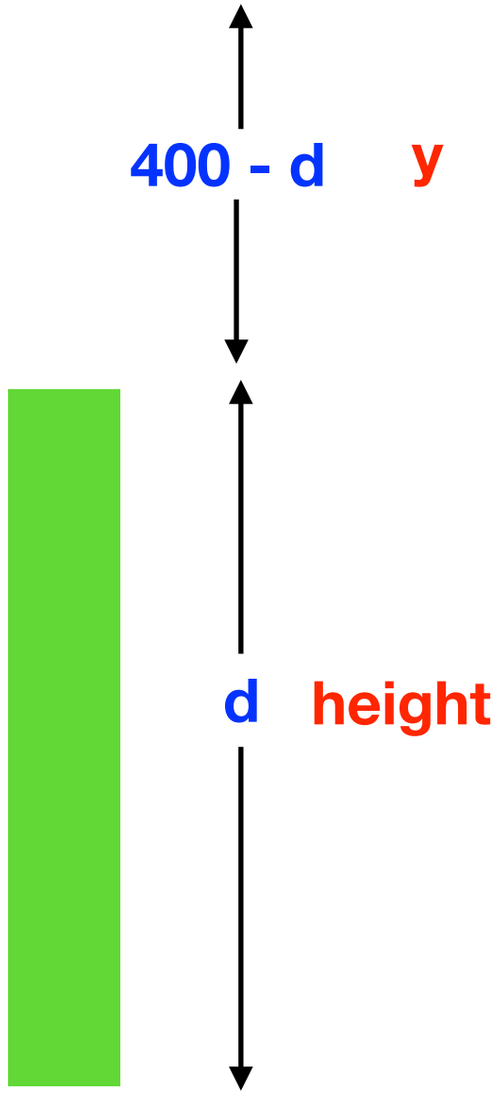
y

so far...

```
.attr("height", d => d)
```

```
.attr("y", d => 400 - d)
```

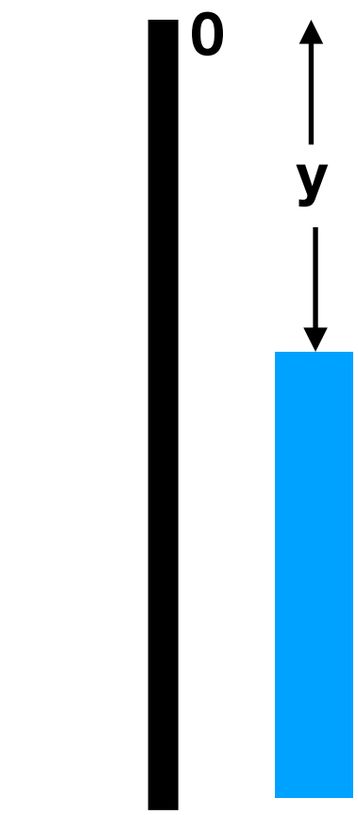
1. the data (d) is the bar height
2. y is the gap on top
3. y + bar height = svg height
4. conceptual leap: y starts at the top



Scales (one approach)

```
var yScale = d3.scaleLinear()
    .domain([0, datamax])
    .range([0, svgheight]);
```

range



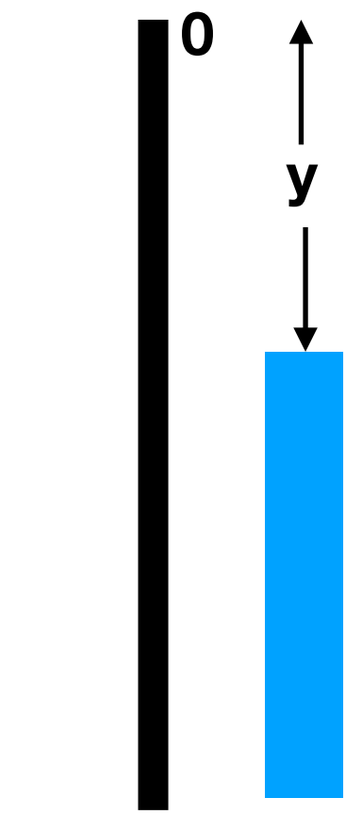

```
.attr("y", d => h - yScale(d));
```

```
.attr("height", d => yScale(d));
```

Scales (approach generally used with axes)

```
var yScale = d3.scaleLinear()
    .domain([0, datamax])
    .range([svgheight, 0]);
```

range




```
.attr("y", d => yScale(d));
```

```
.attr("height", d => h - yScale(d));
```

EDAV5_5_scaleLinear.html

linear scale
for y-axis