Ordinal Scales
(*IDVW2,* Ch. 9)

Ordinal scales

```
var ordscale = d3.scaleBand()
    .domain(["cold", "warm", "hot"])
    .range([0, 600]);

> ordscale("cold");
0

> ordscale("warm");
200

> ordscale("hot");
400
```

0   200   400   600
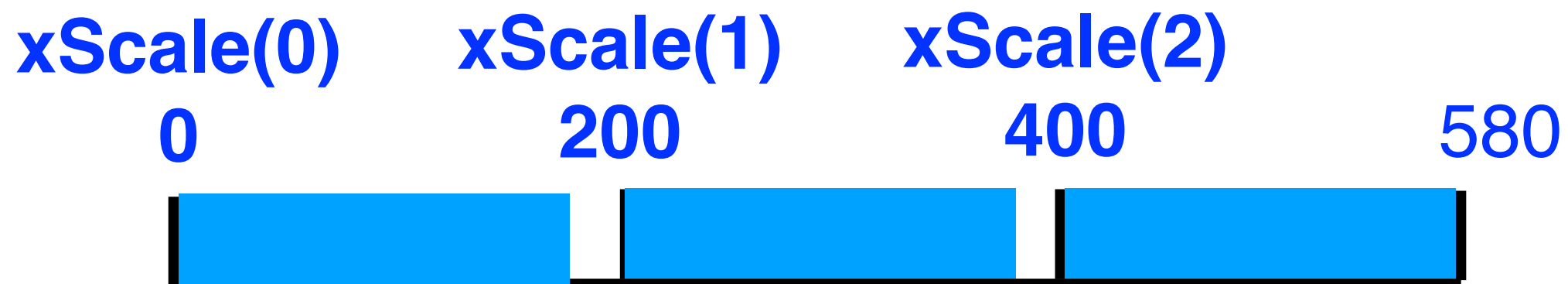
d3.range( )   .length

```
var ordscale = d3.scaleBand()
   .domain([0, 1, 2, 3, 4])
    .range([0, 600]);
```

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

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

Ordinal scales

```
var xScale = d3.scaleBand()
    .domain(d3.range(dataset.length))
    .range([0, 580])
    .paddingInner([.1]);
```
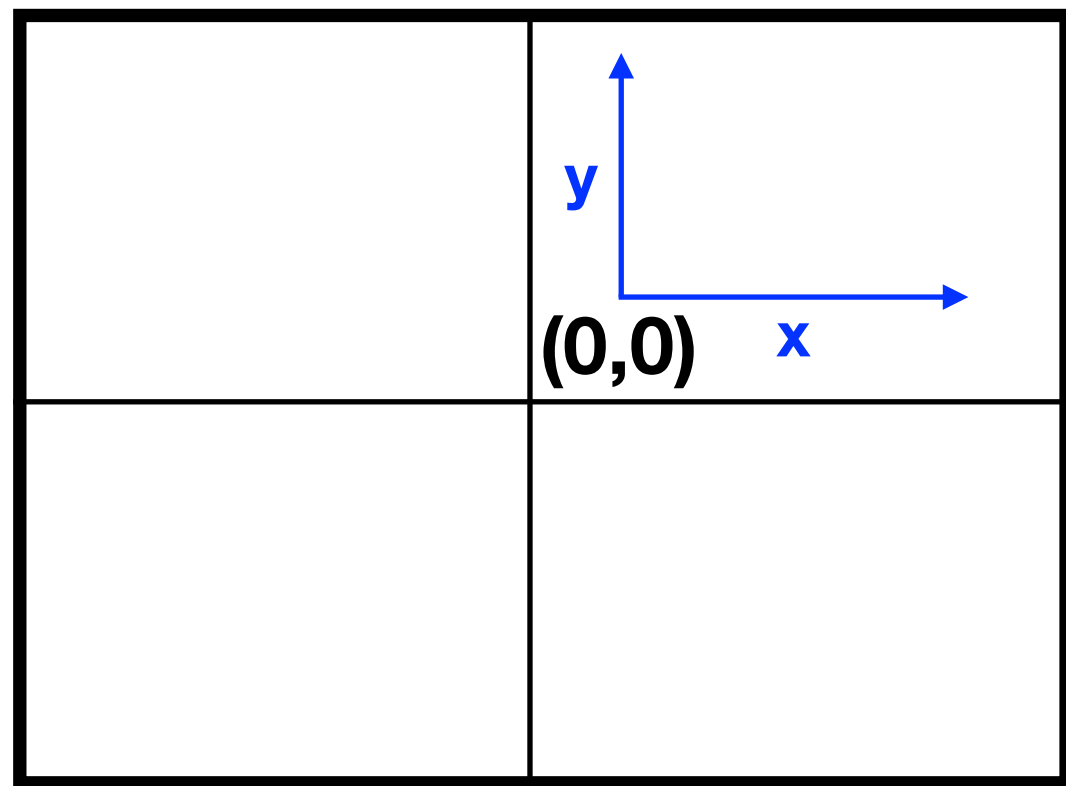

xScale(0)   xScale(1)   xScale(2)
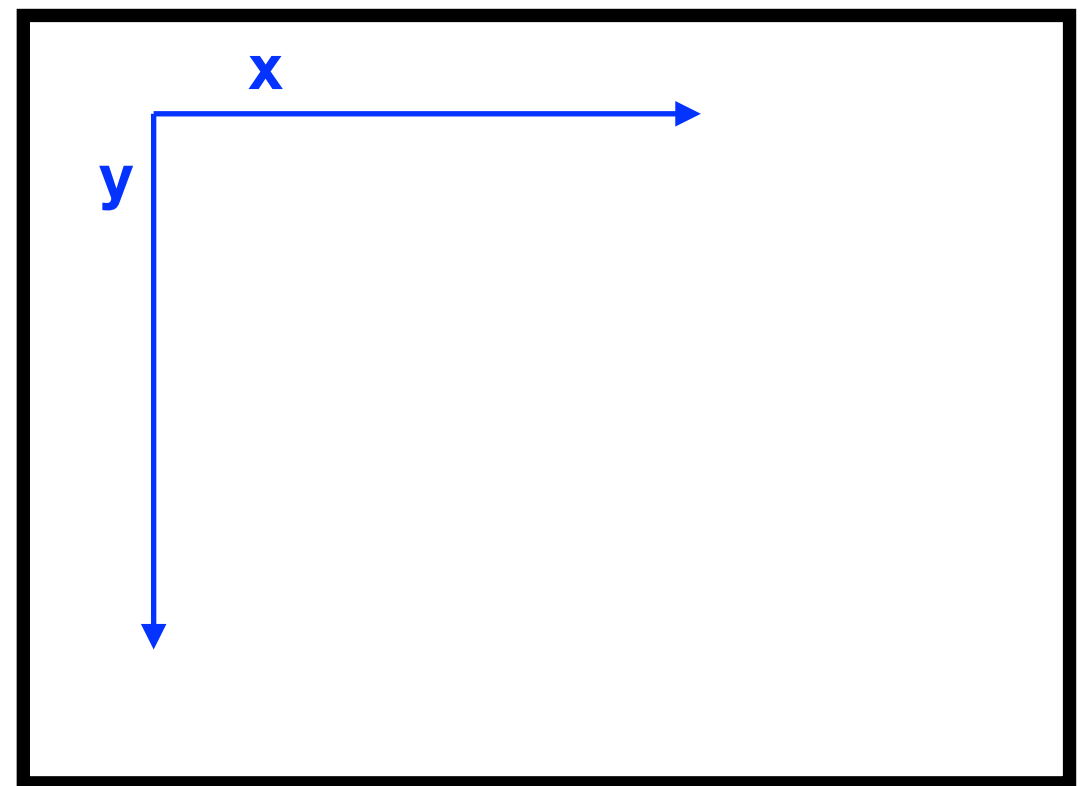
0   200   400   580

```
> xScale.bandwidth();
  180
```

Linear Scales

(*IDVW2*, Ch. 6)

Cartesian Coordinates

SVG

(0,0)

y

(0,0)

x

(0,0)

x

y

X

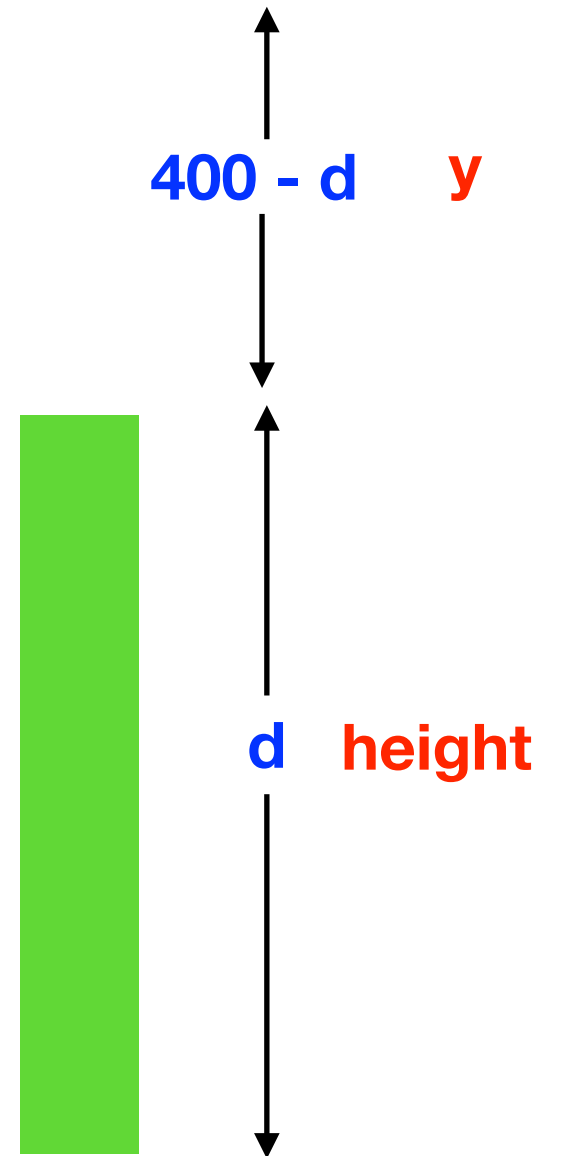**Dealing with negative values**

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

y

so far...

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

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

400 - d   y

d   height

USA UPSIDE DOWN MAP

1. NEW HAMPSHIRE   5. CONNECTICUT
2. VERMONT   6. NEW JERSEY
3. MASSACHUSETTS   7. DELAWARE
4. RHODE ISLAND   8. MARYLAND

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

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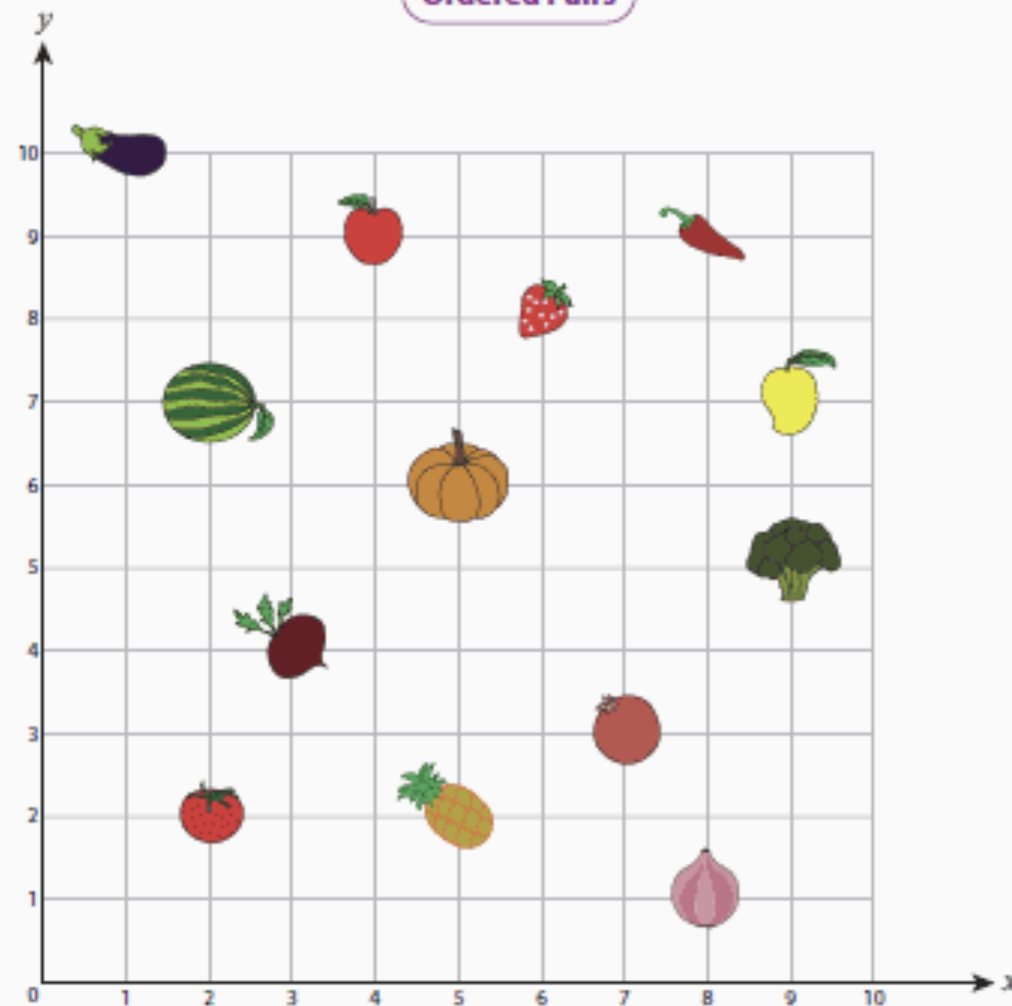
Ordered Pairs

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) _____

Scales (one approach, but generally not used)

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

range

yScale(0) = ▮ 0

y

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

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

yScale(datamax) =

svg height

Scales (approach generally used with axes)

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

range

yScale(0) =
svg height

yScale(datamax) =   0

yScale(d)

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

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