



# **STARBUCKS**Mapping

Dot, Choropleth, Graduated Circle, and Cartogram Maps

# Four Types of Maps

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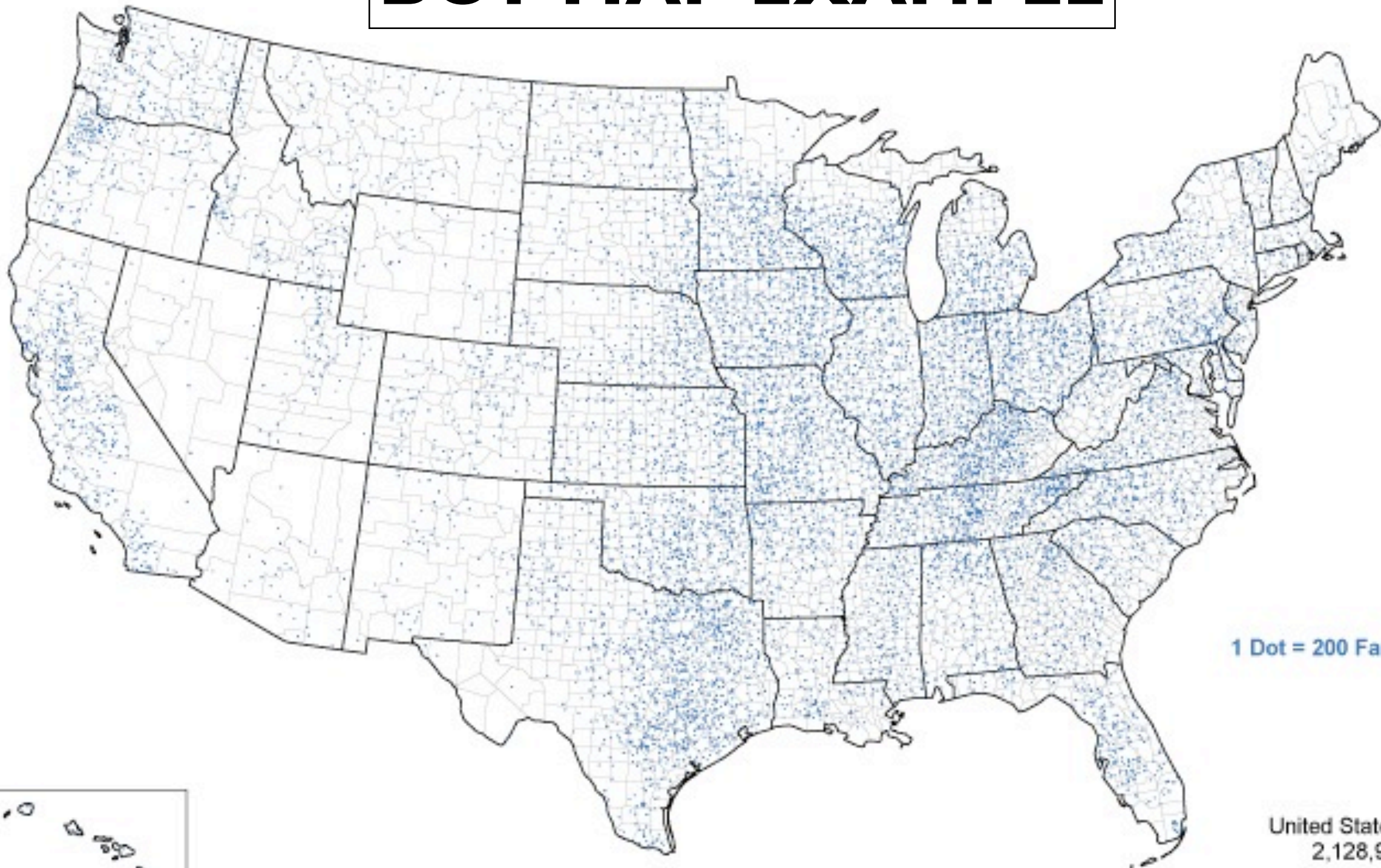
- **Dot** - A thematic map in which a dot represents some frequency of the mapped variable. For example, one dot represents 200 Farms in the USA.
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- **Cartogram** - A map that has been simplified to present a single idea in a diagrammatic way; the base is not normally true to scale. For example, a population density map of the USA would have New Jersey much bigger in size on the map than Alaska, Texas, California, and Montana, because it has a much higher population density. The size of each state is determined by the statistics.

The dot-distribution maps portray quantitative data as a dot which represents a number of the phenomenon found within the boundary of a geographic area. The pattern of distributed dots reflects the **general locations** where the phenomenon was most likely to occur. The pattern and number of dots within a geographic area reveal the density of the phenomenon.

The dot value assigned to a dot actually reflects **a range of data values**. For example, if the legend indicates that one dot equals 500 acres of corn, then in most cases, no dot is placed for county-level geographic areas with data values less than 250 acres of corn, one dot is placed for county-level geographic areas with data values ranging from 250 to 749 acres of corn, two dots are placed for county-level geographic areas with data values ranging from 750 to 1,249 acres of corn, and so on.

Number of Farms: 2002

# DOT MAP EXAMPLE



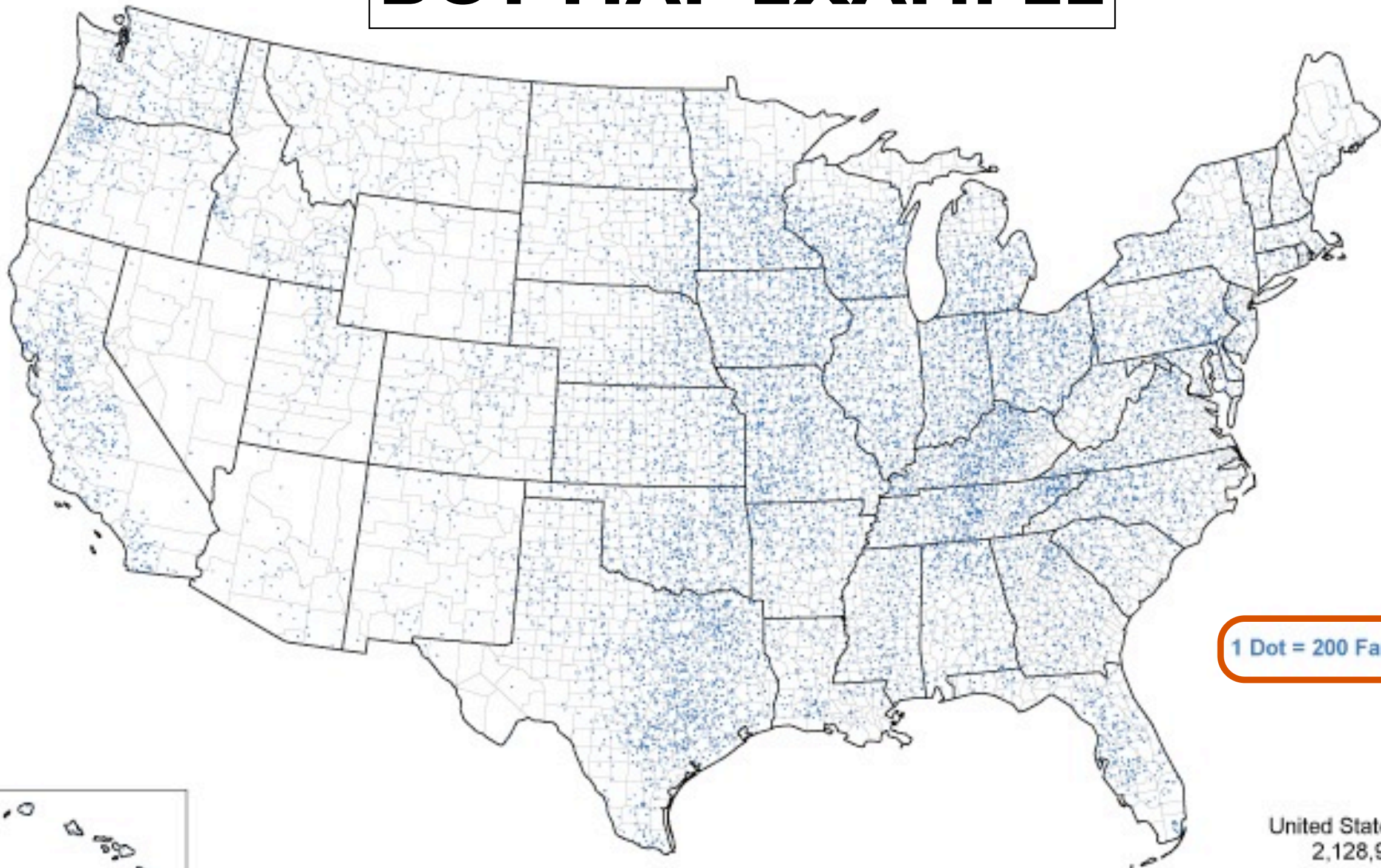
02-M001

U.S. Department of Agriculture, National Agricultural Statistics Service



Number of Farms: 2002

# DOT MAP EXAMPLE

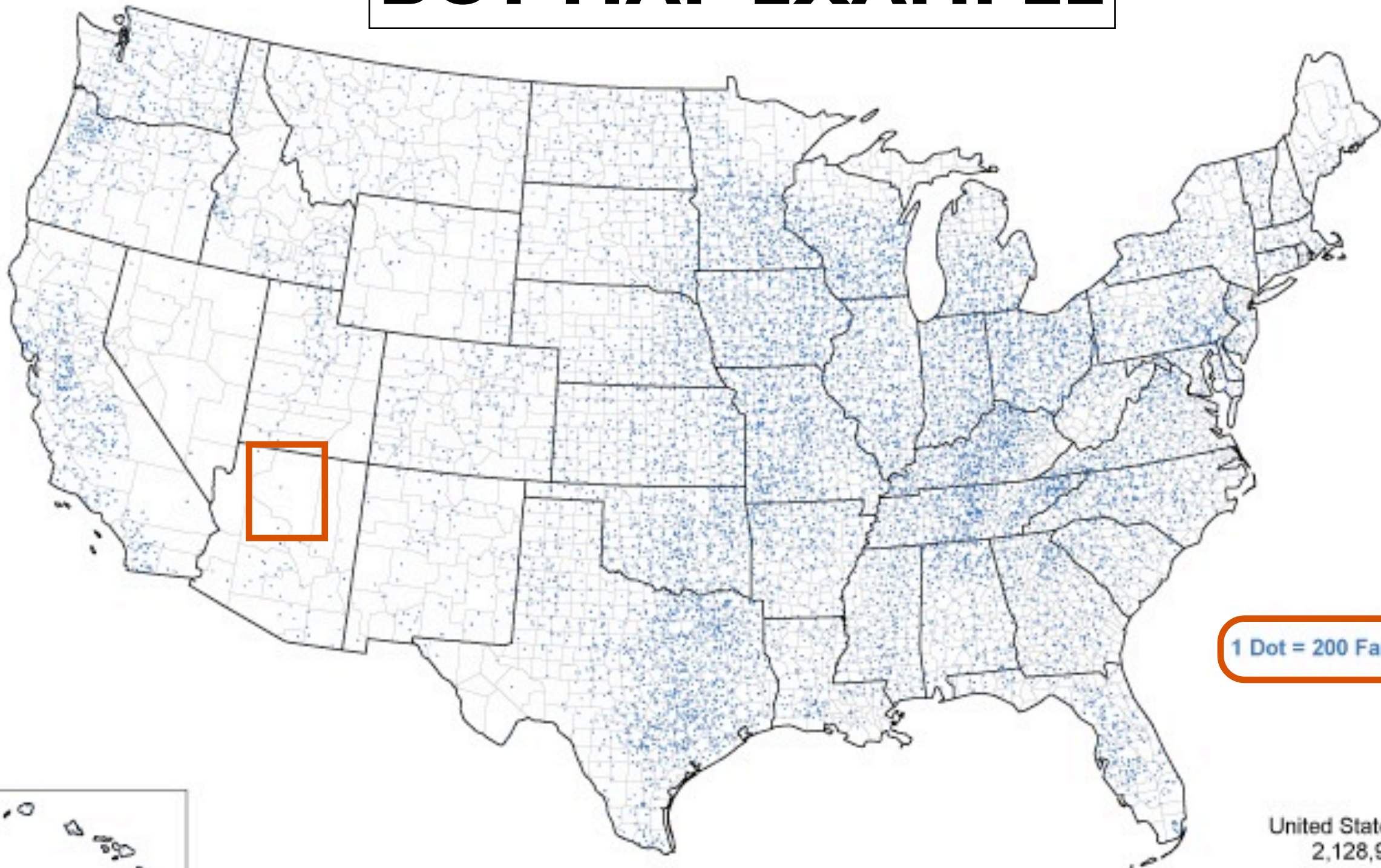


United States Total  
2,128,982



Number of Farms: 2002

# DOT MAP EXAMPLE

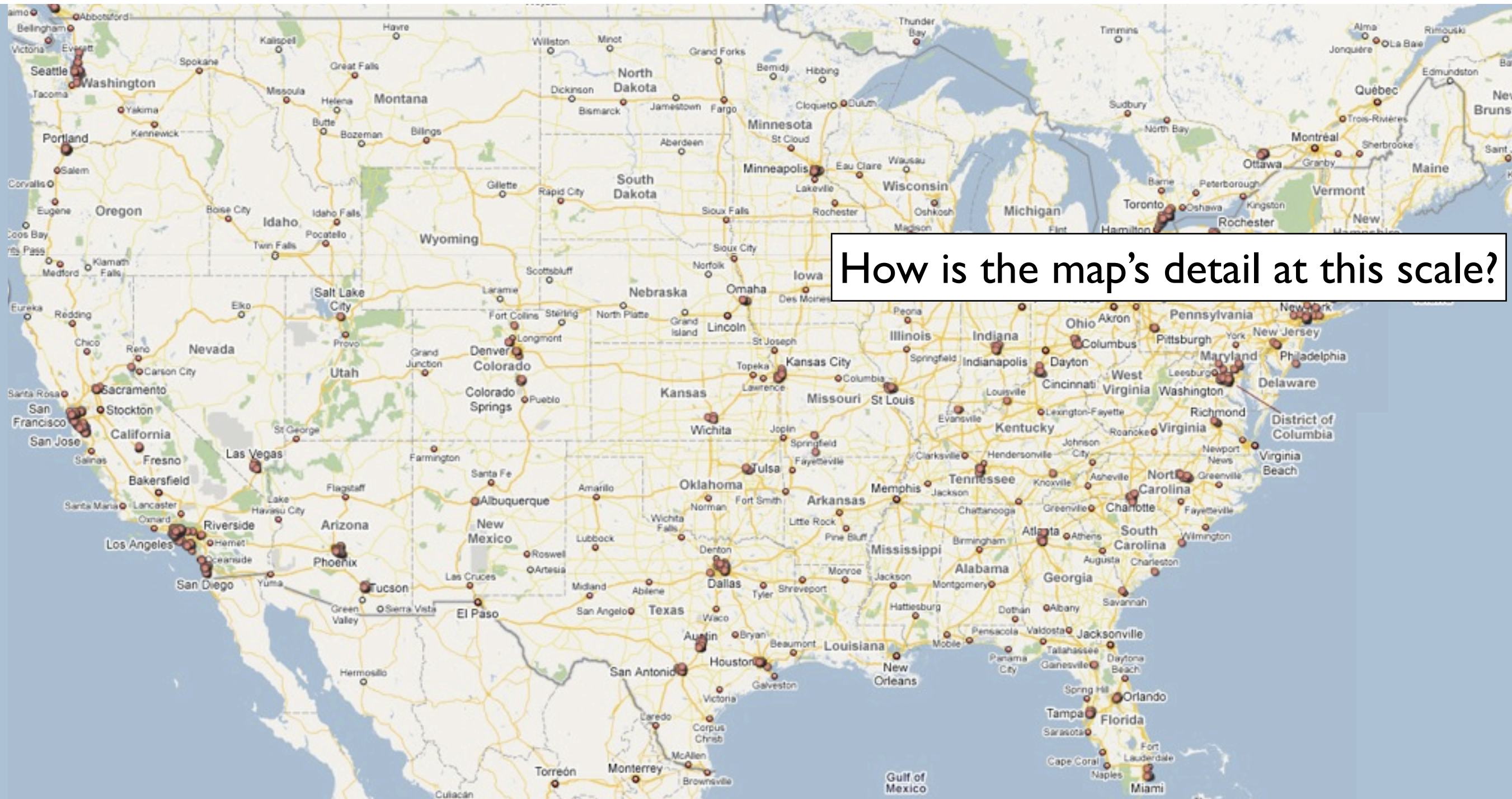


1 Dot = 200 Farms

United States Total  
2,128,982



# Dot Map for Starbucks in the United States, 2009

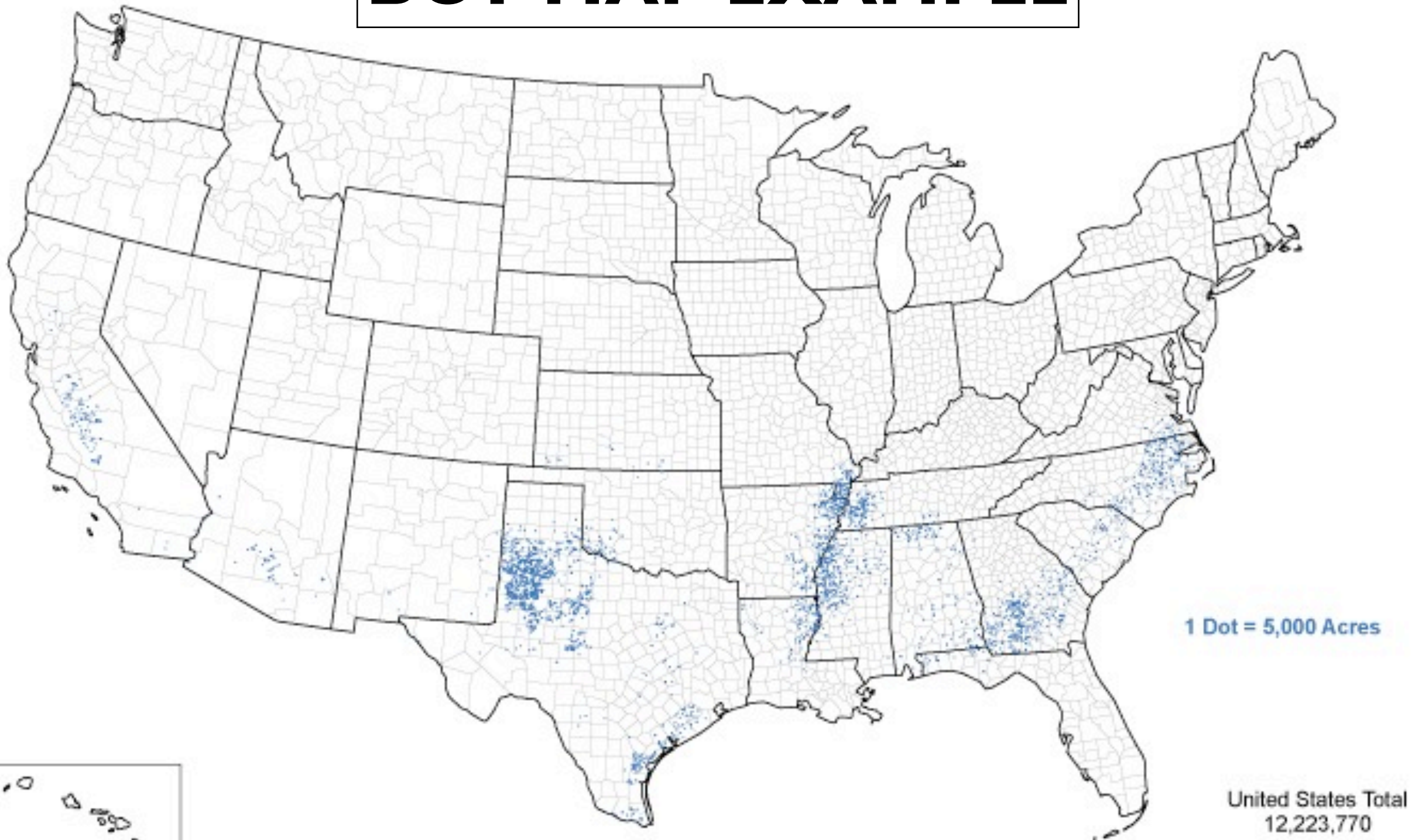


Each Red Dot Represents One Starbucks



Upland Cotton, Harvested Acres: 2002

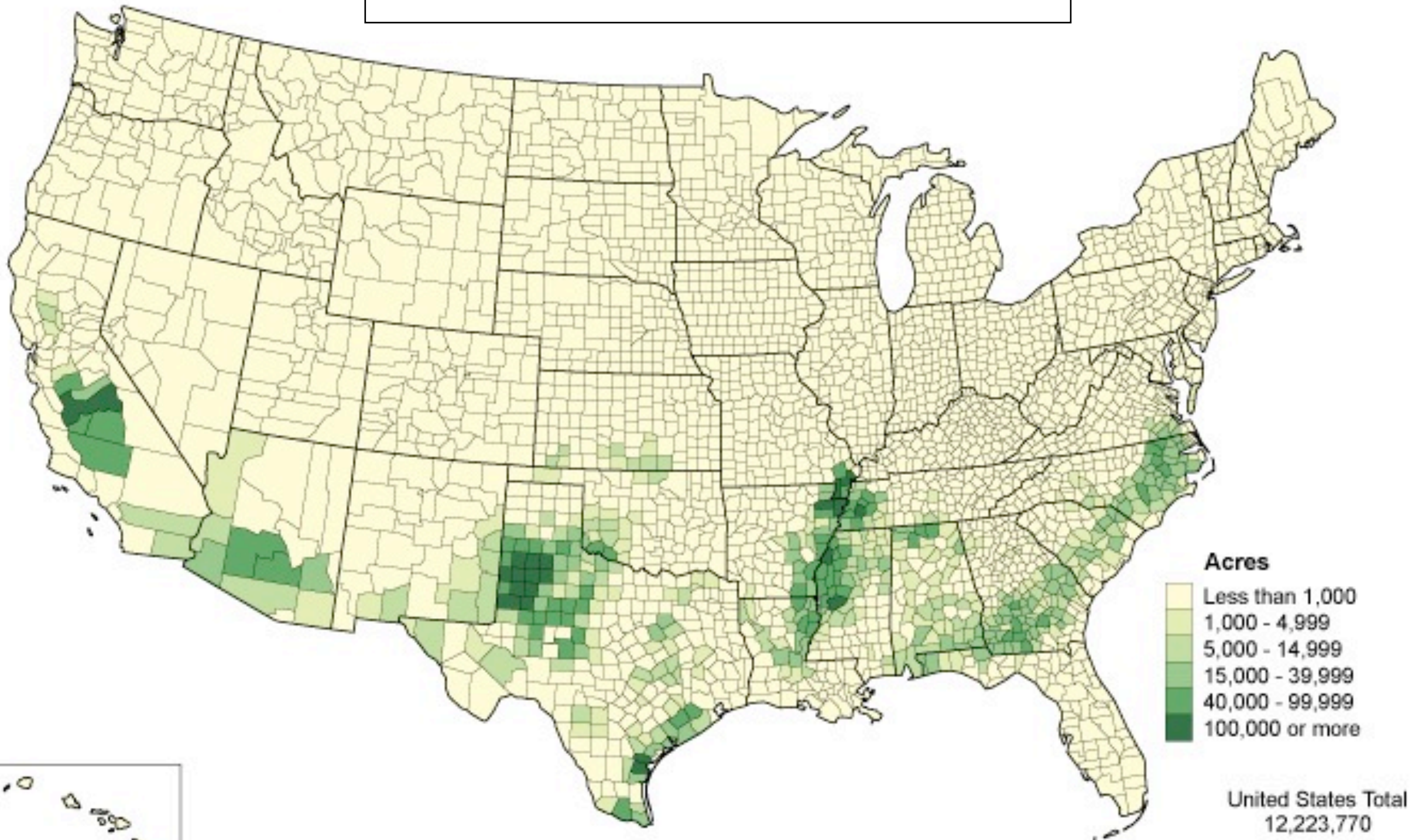
# DOT MAP EXAMPLE



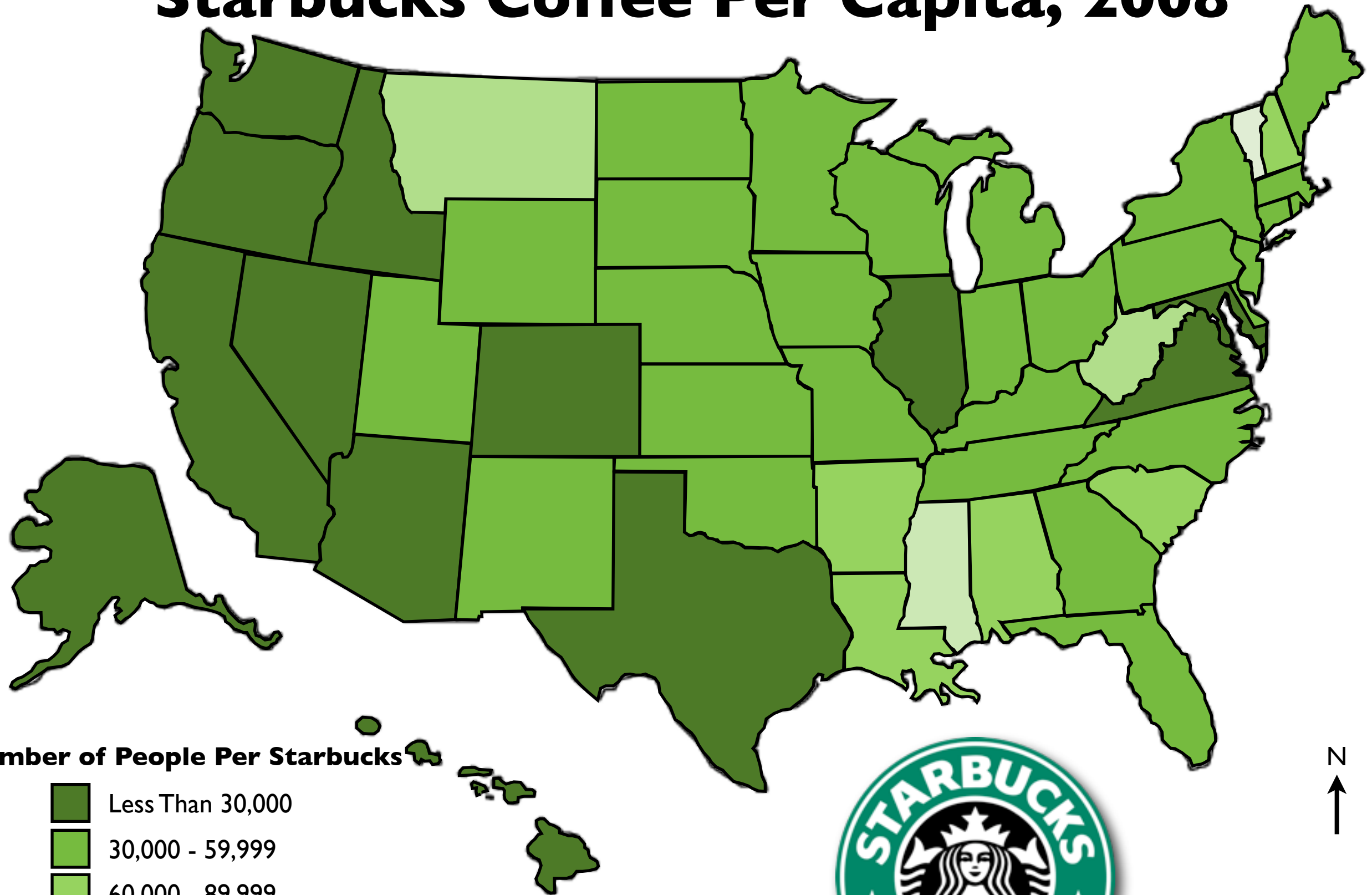


Upland Cotton, Harvested Acres: 2002

# CHOROPLETH MAP



# Starbucks Coffee Per Capita, 2008

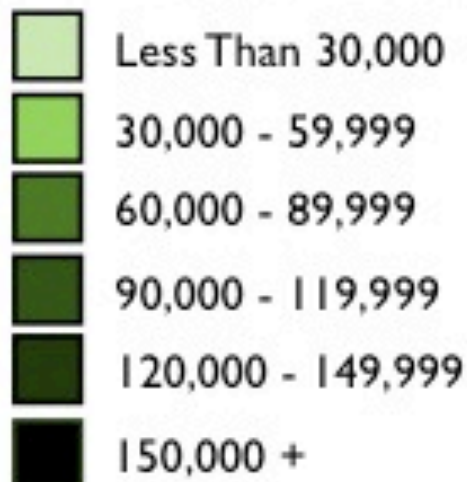




# Starbucks Coffee Per Capita, 2008



Number of People Per Starbucks



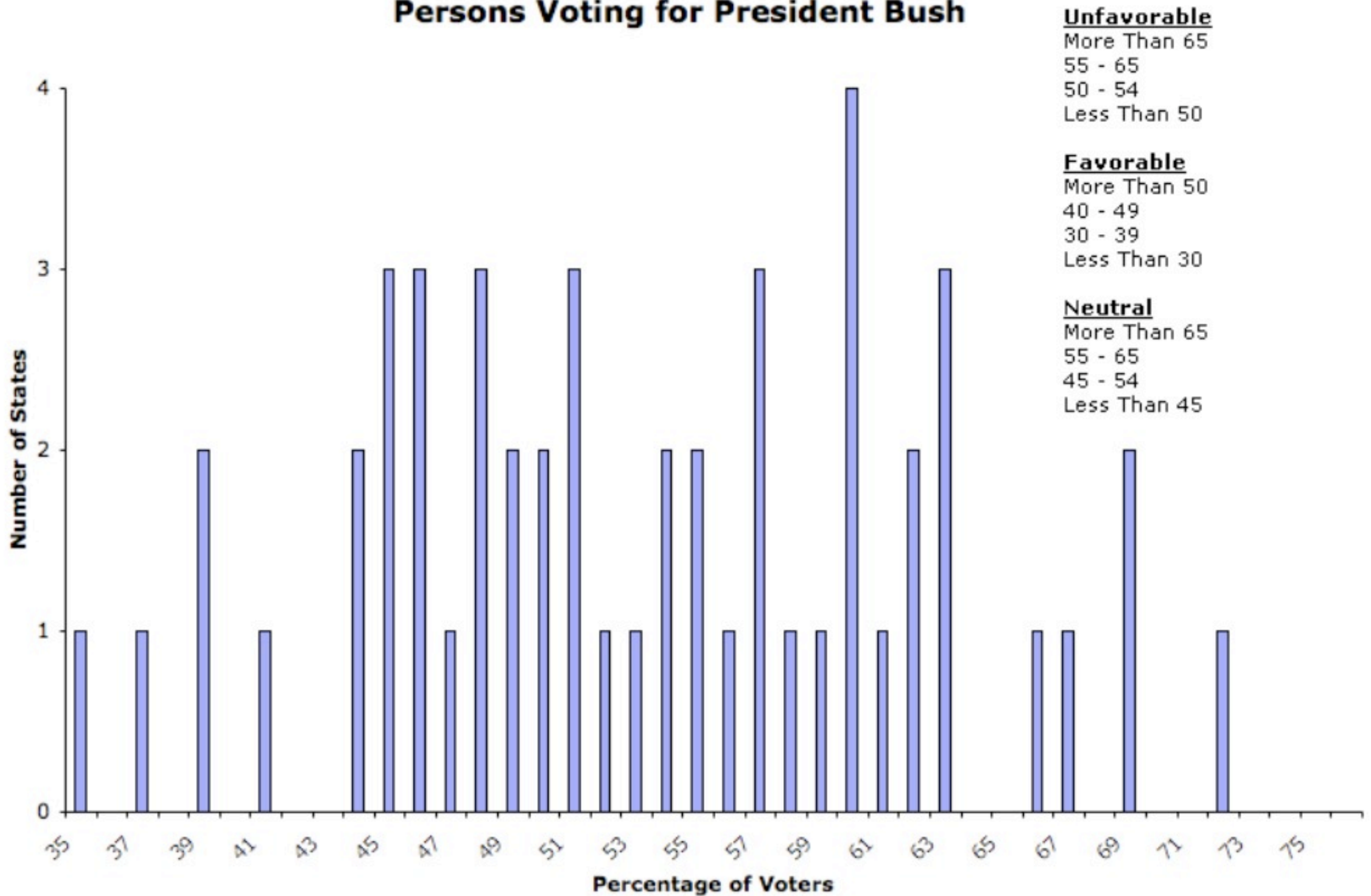
# The Power of the Cartographer

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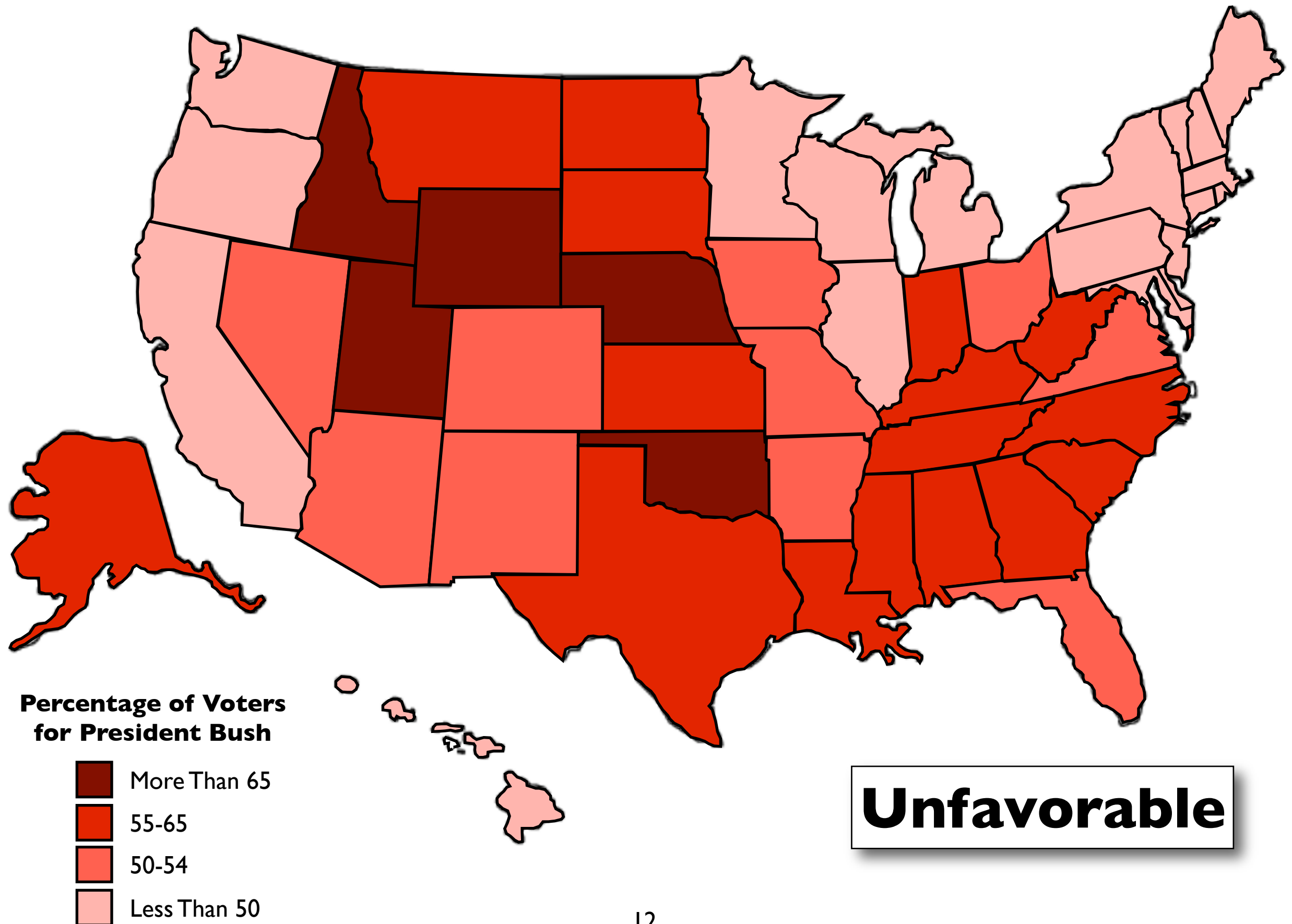
How can the cartographer use the same statistics to create different looking maps?



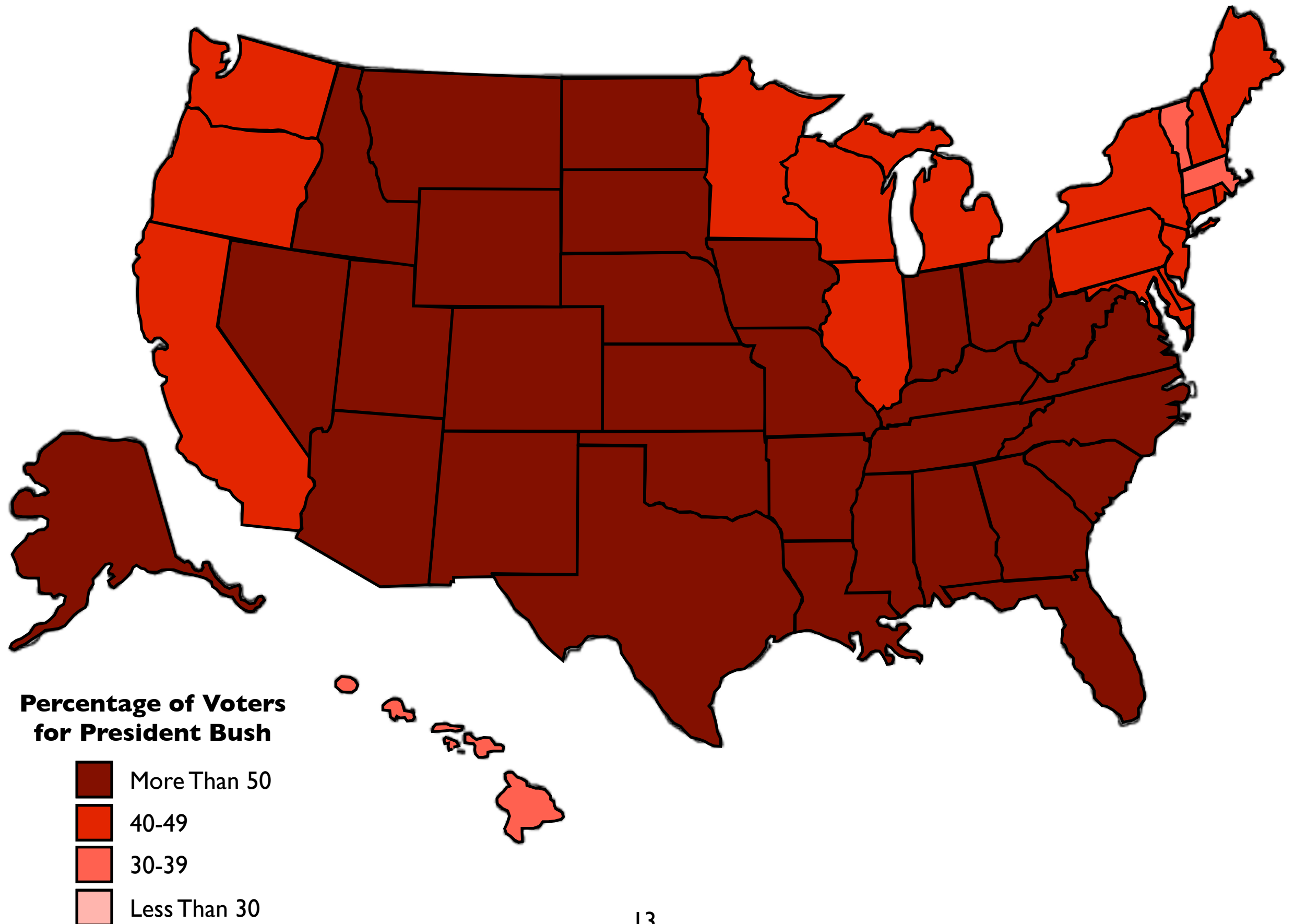
## Persons Voting for President Bush



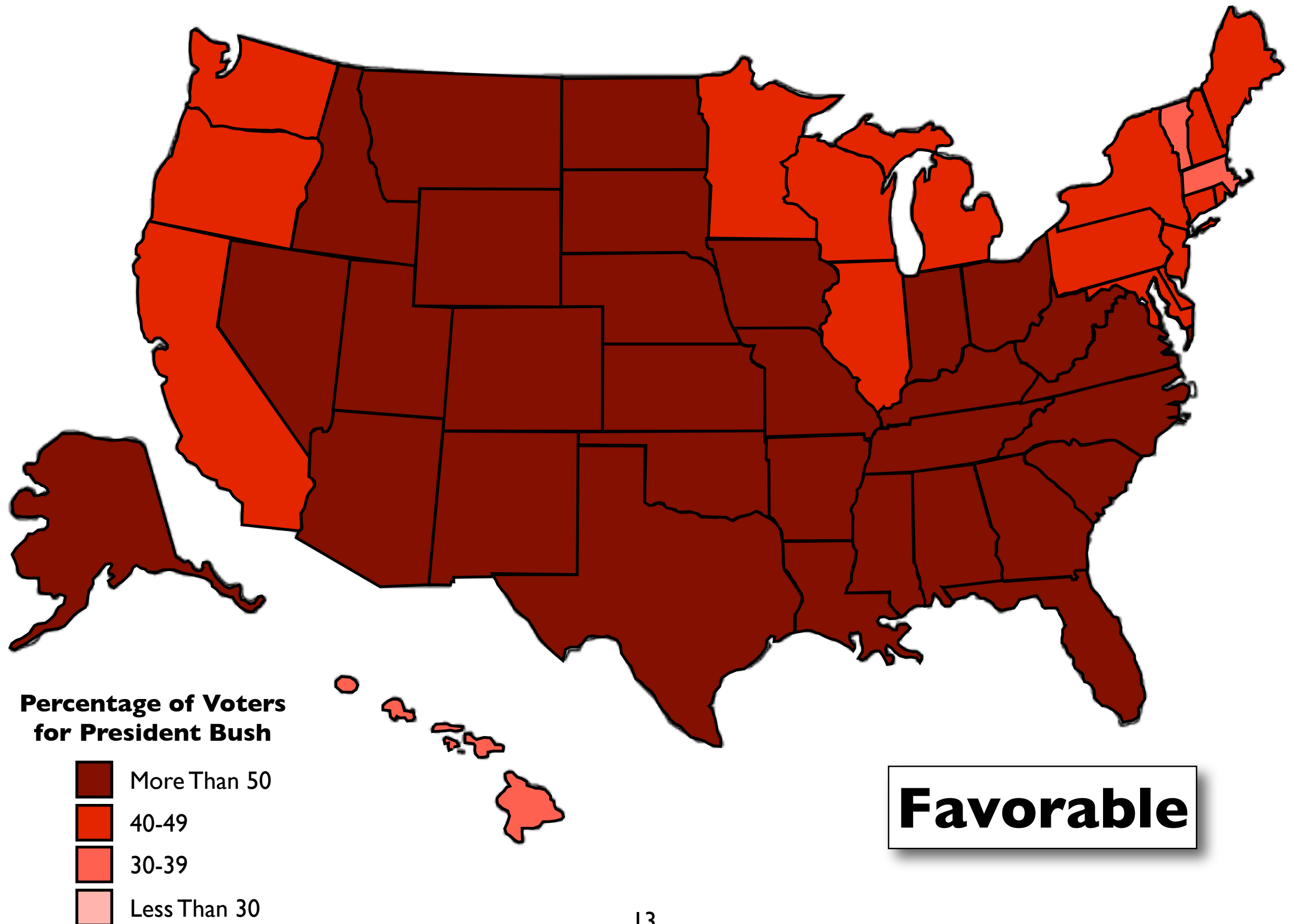
# Persons Voting for President Bush, 2004



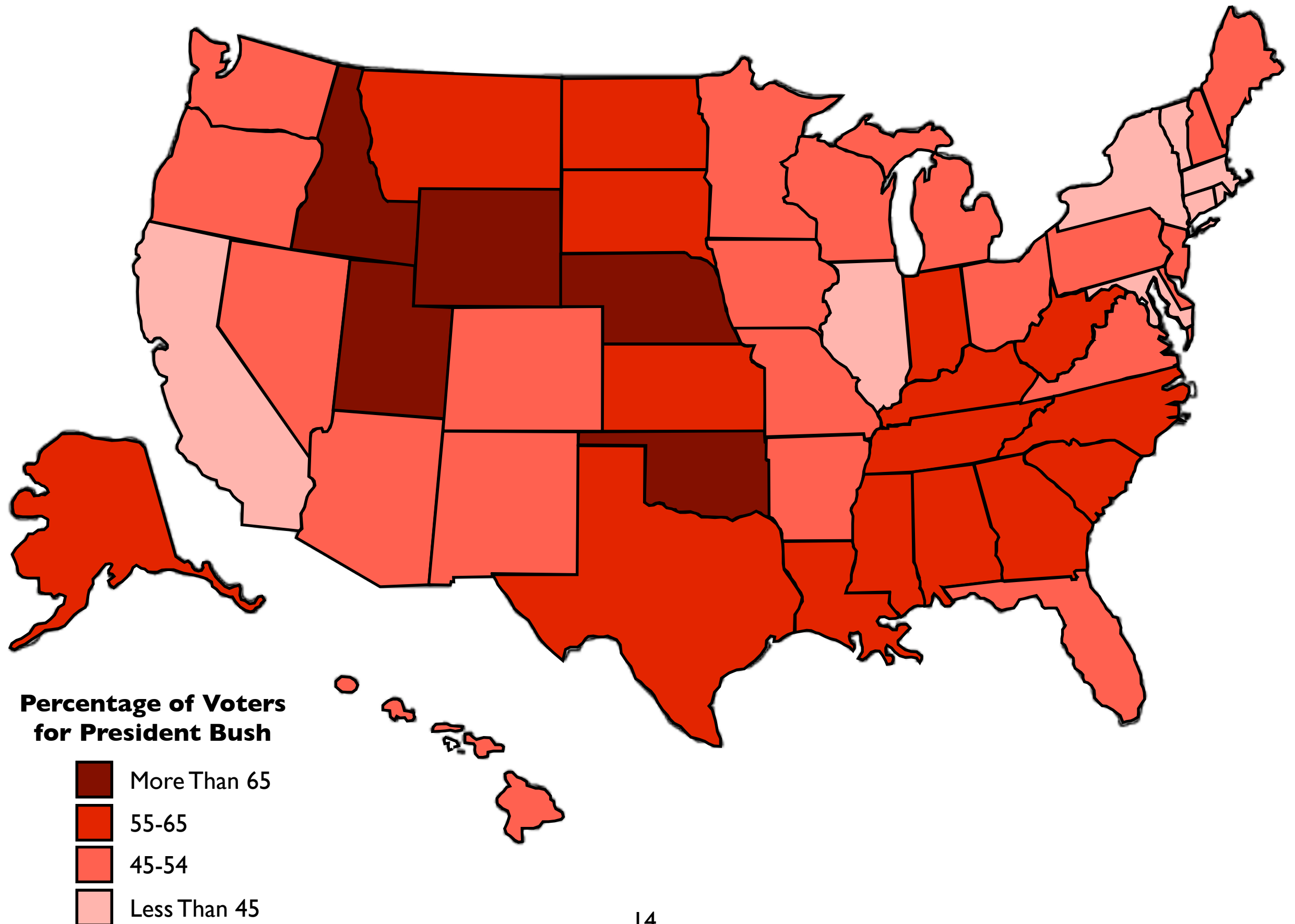
# Persons Voting for President Bush, 2004



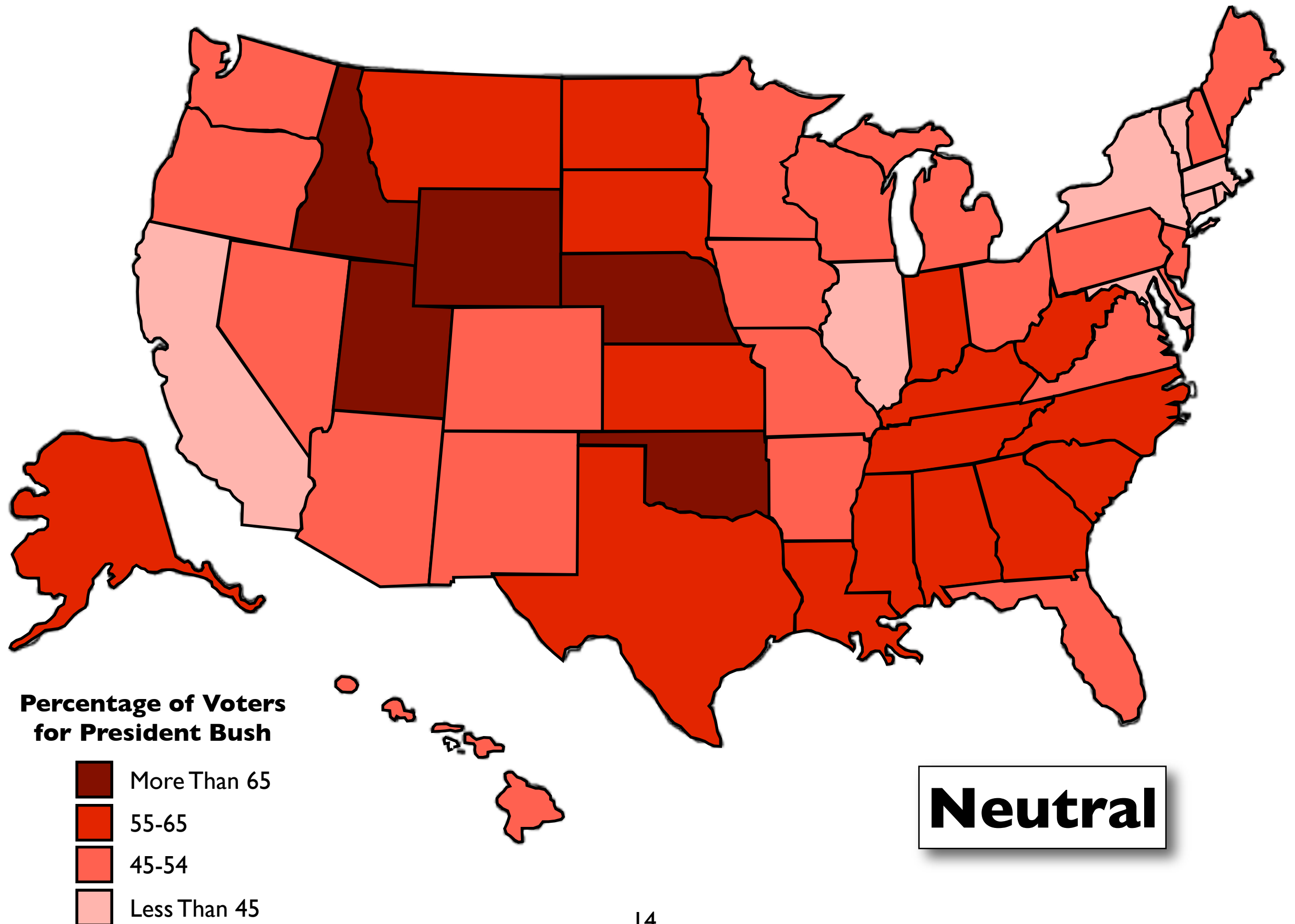
# Persons Voting for President Bush, 2004



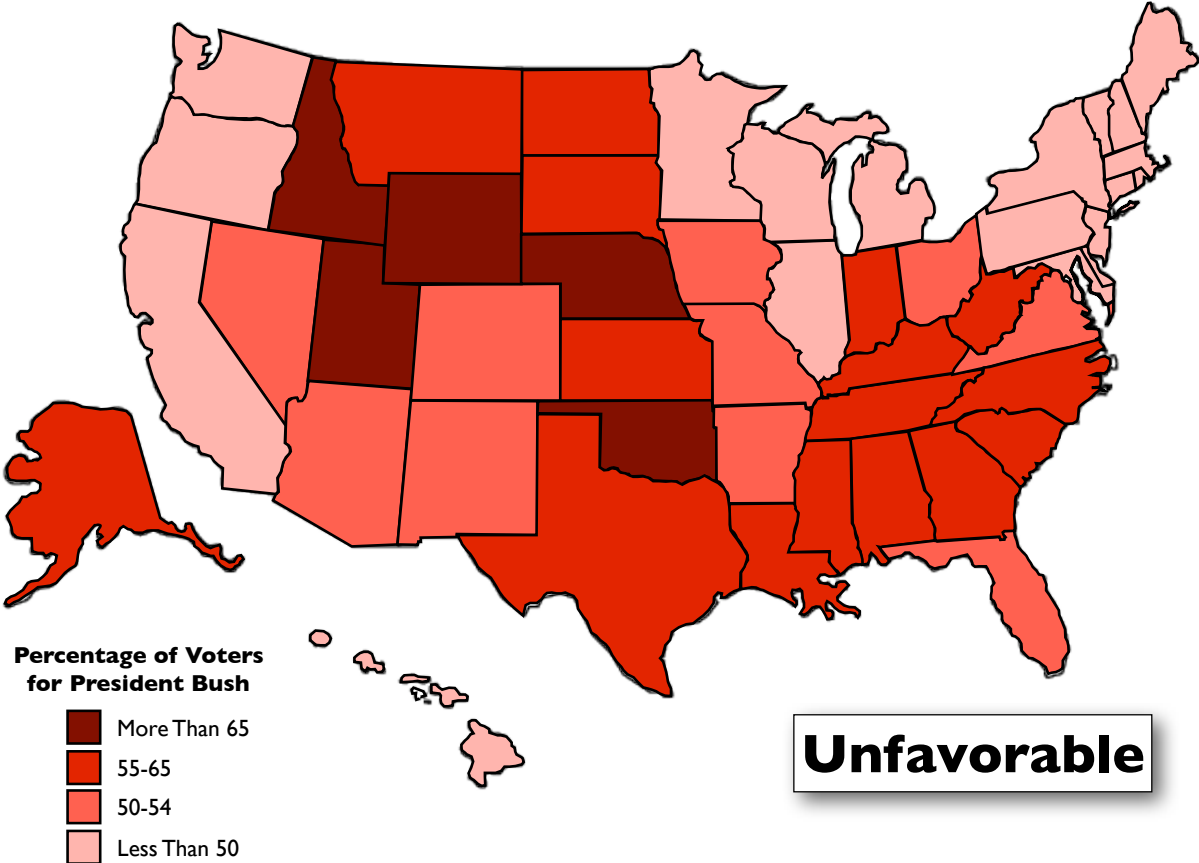
# Persons Voting for President Bush, 2004



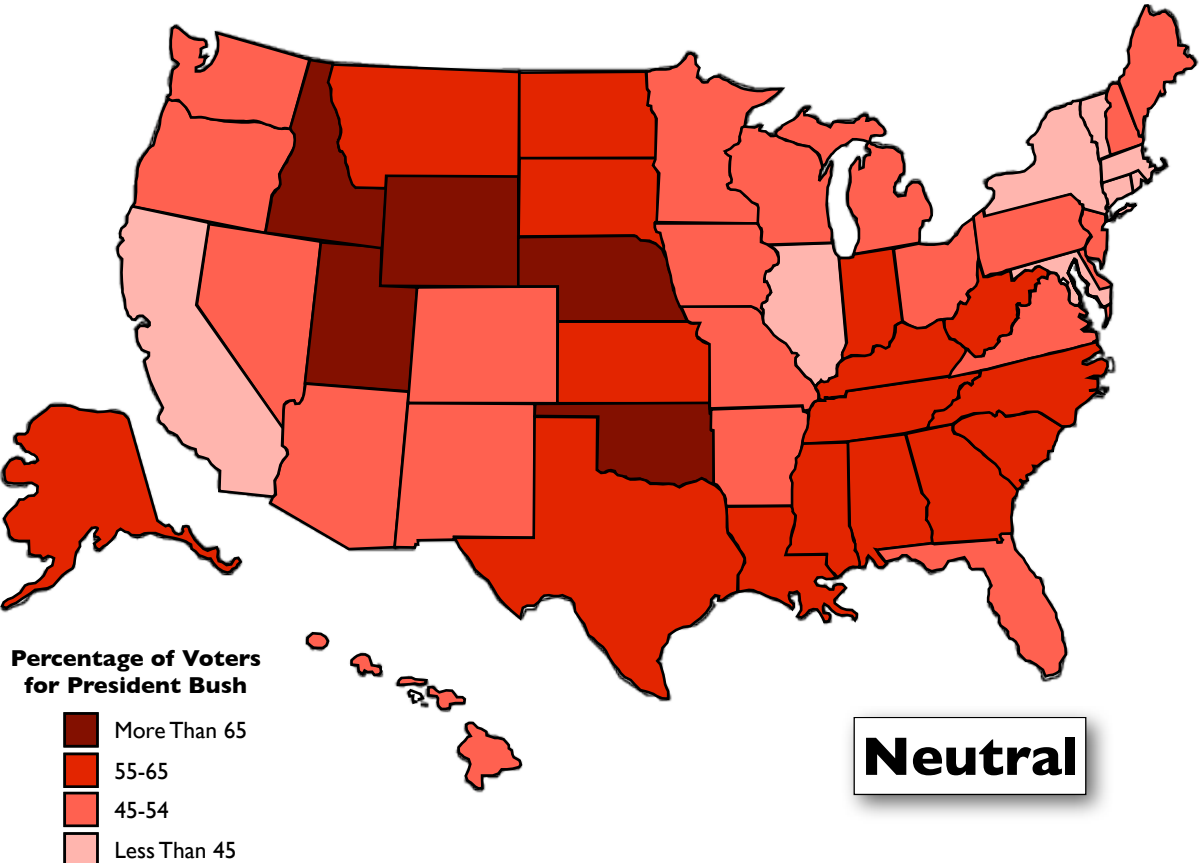
# Persons Voting for President Bush, 2004



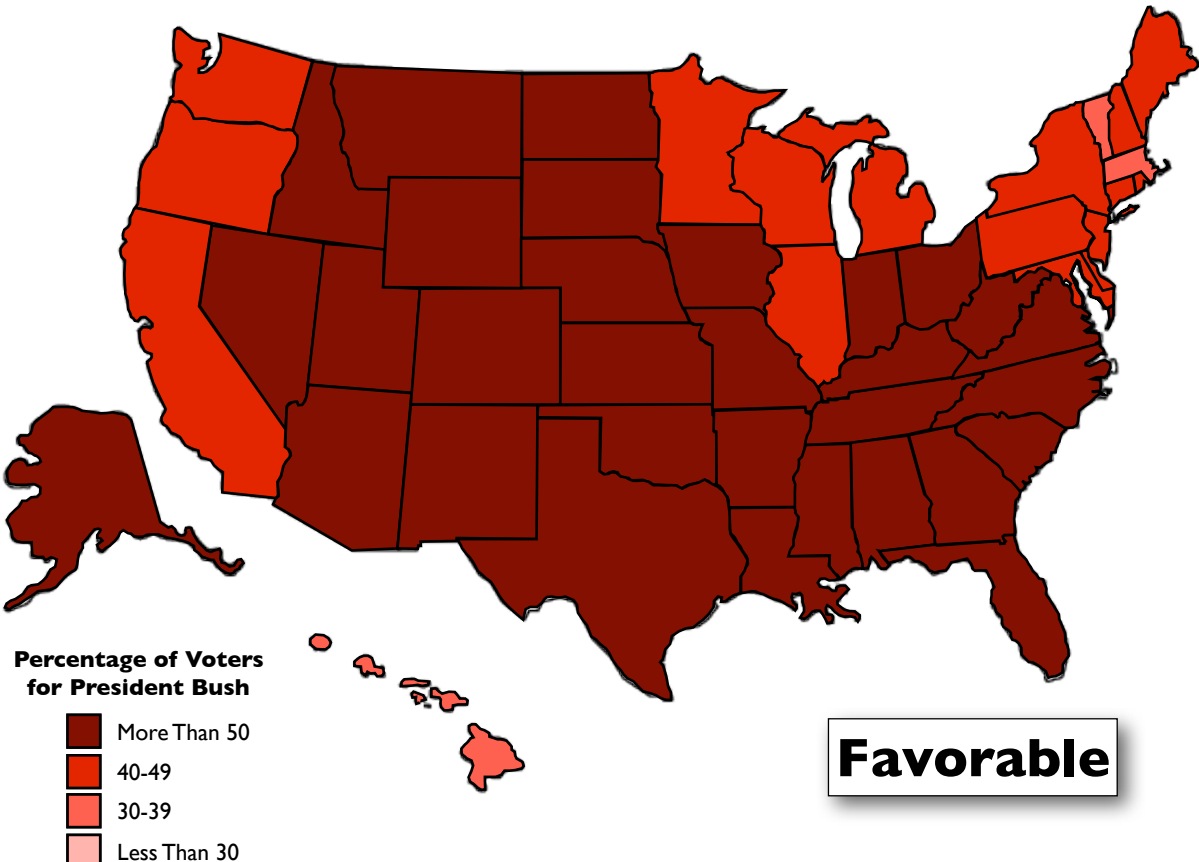
Persons Voting for President Bush, 2004



Persons Voting for President Bush, 2004



Persons Voting for President Bush, 2004



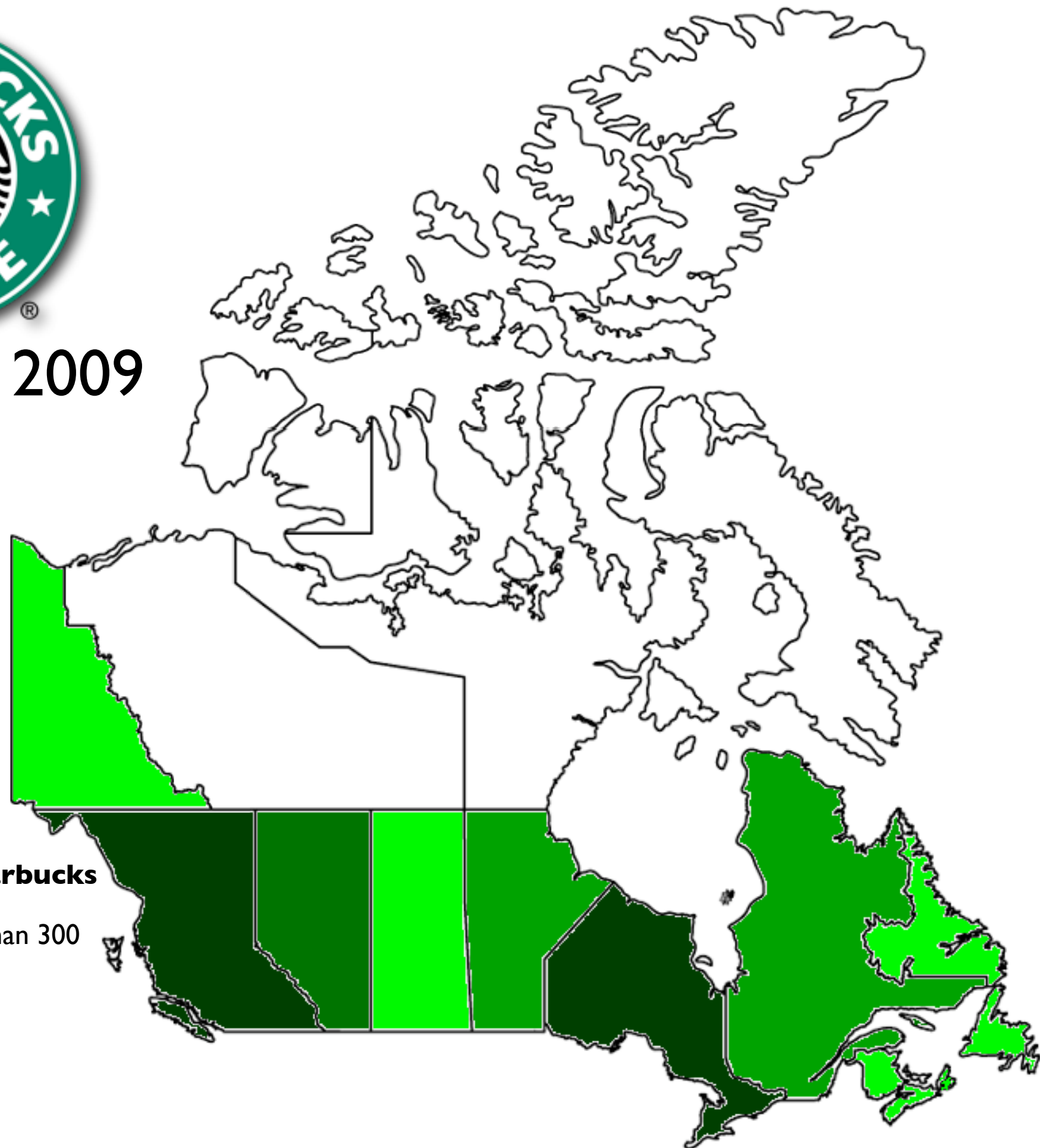
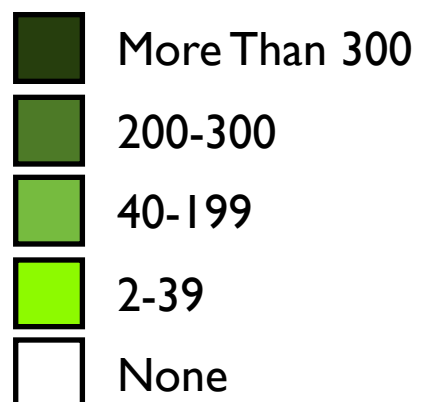
**Which map is:  
correct?  
fair?  
unfair?**





In Canada, 2009

**Number of Starbucks**







In Canada, 2009

## Graduated Circle Map Example

5 Starbucks



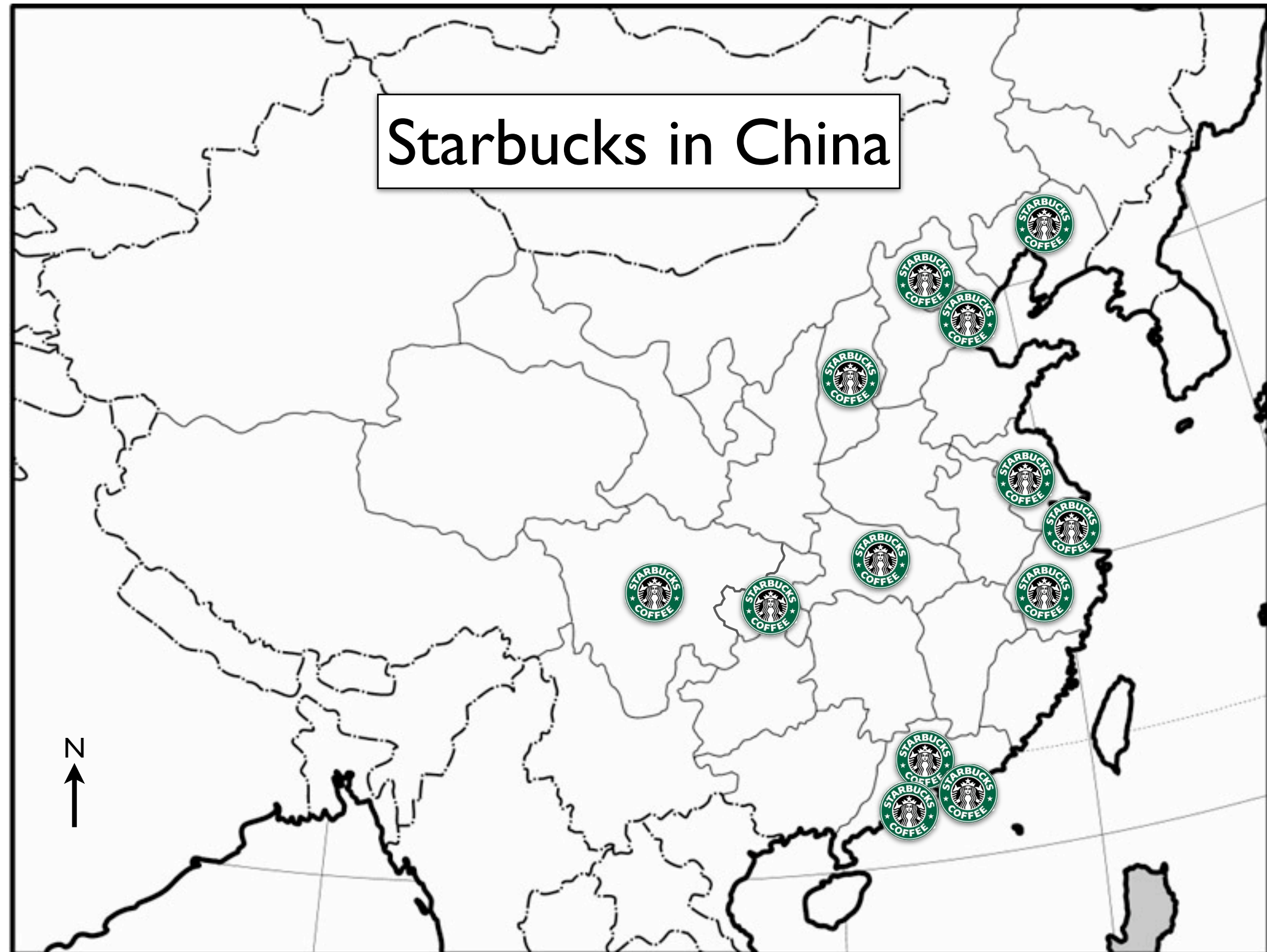


In Canada, 2009

## Graduated Circle Map Example

● 5 Starbucks





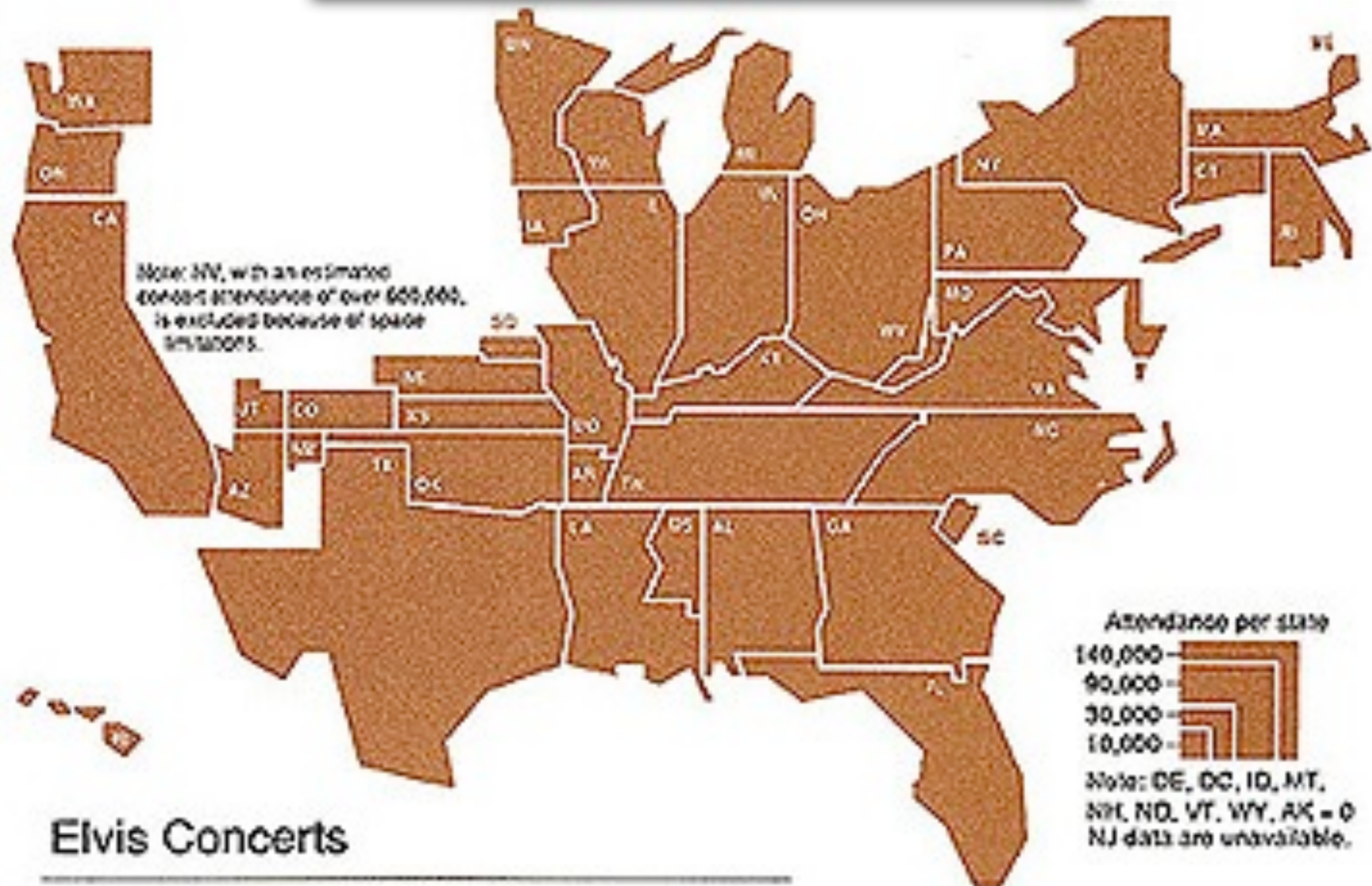
Map shows which provinces have at least one Starbucks.





How is this map different from the previous map?  
Which map is better?

# Cartogram Example



## Elvis Concerts

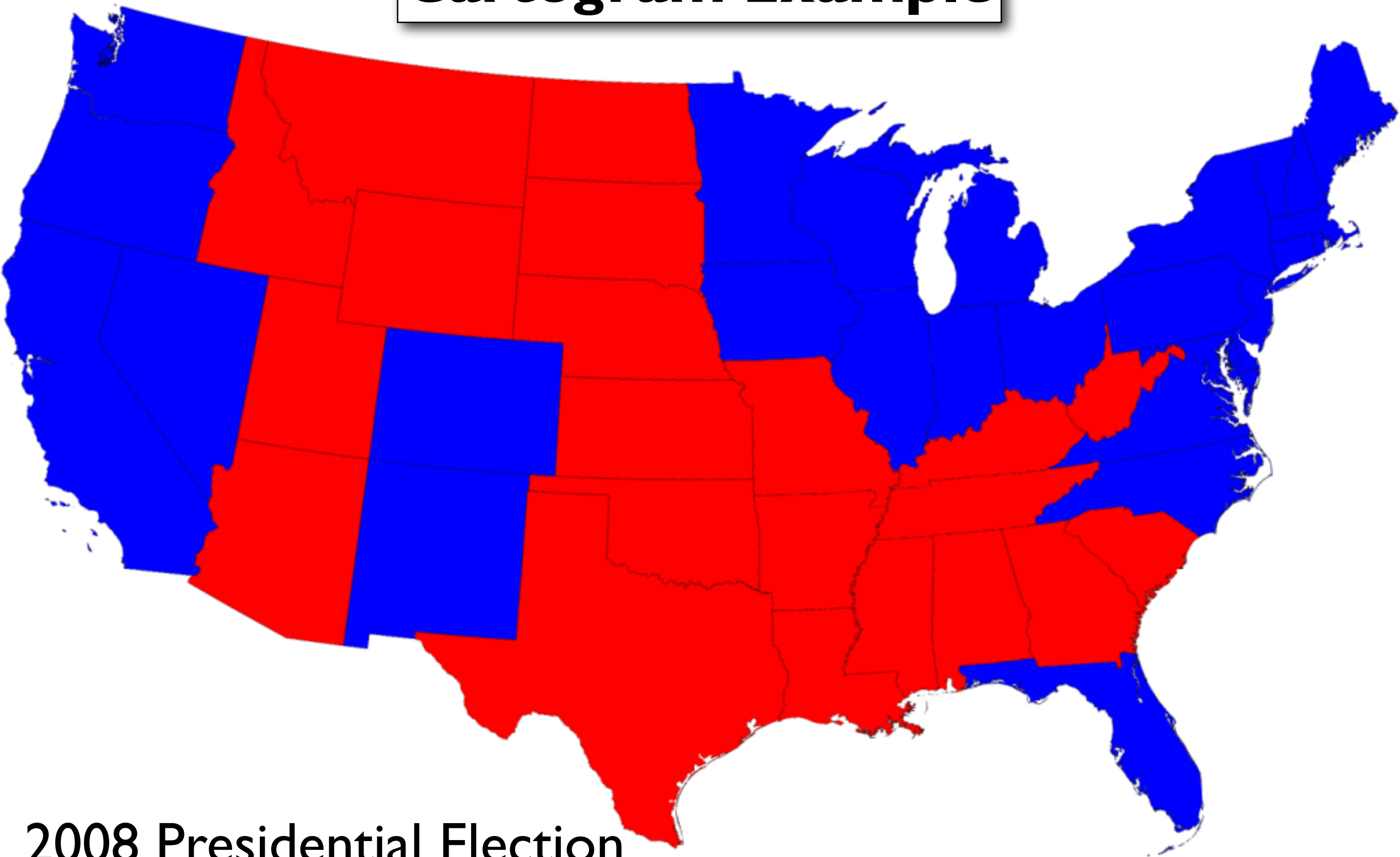
### Attendance per State, 1970 - 1977

Source: Stanley, David E., with Frank Colfey. The Elvis Encyclopedia. Santa Monica, CA: General Publishing Group, Inc., 1994.

© 1995 Andrew Dent and Linda Yumbull

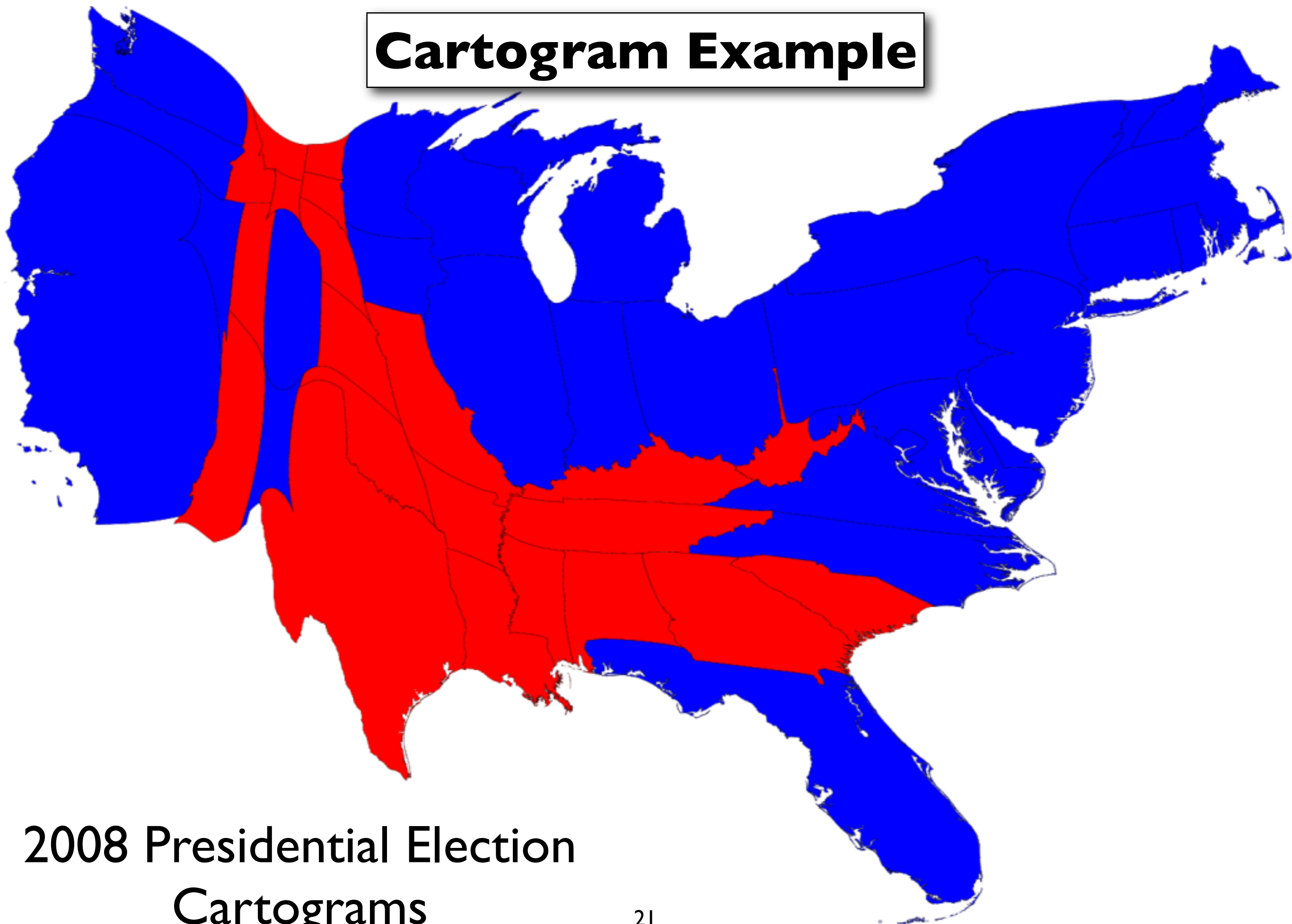


# Cartogram Example



2008 Presidential Election  
Cartograms

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2008 Presidential Election  
Cartograms

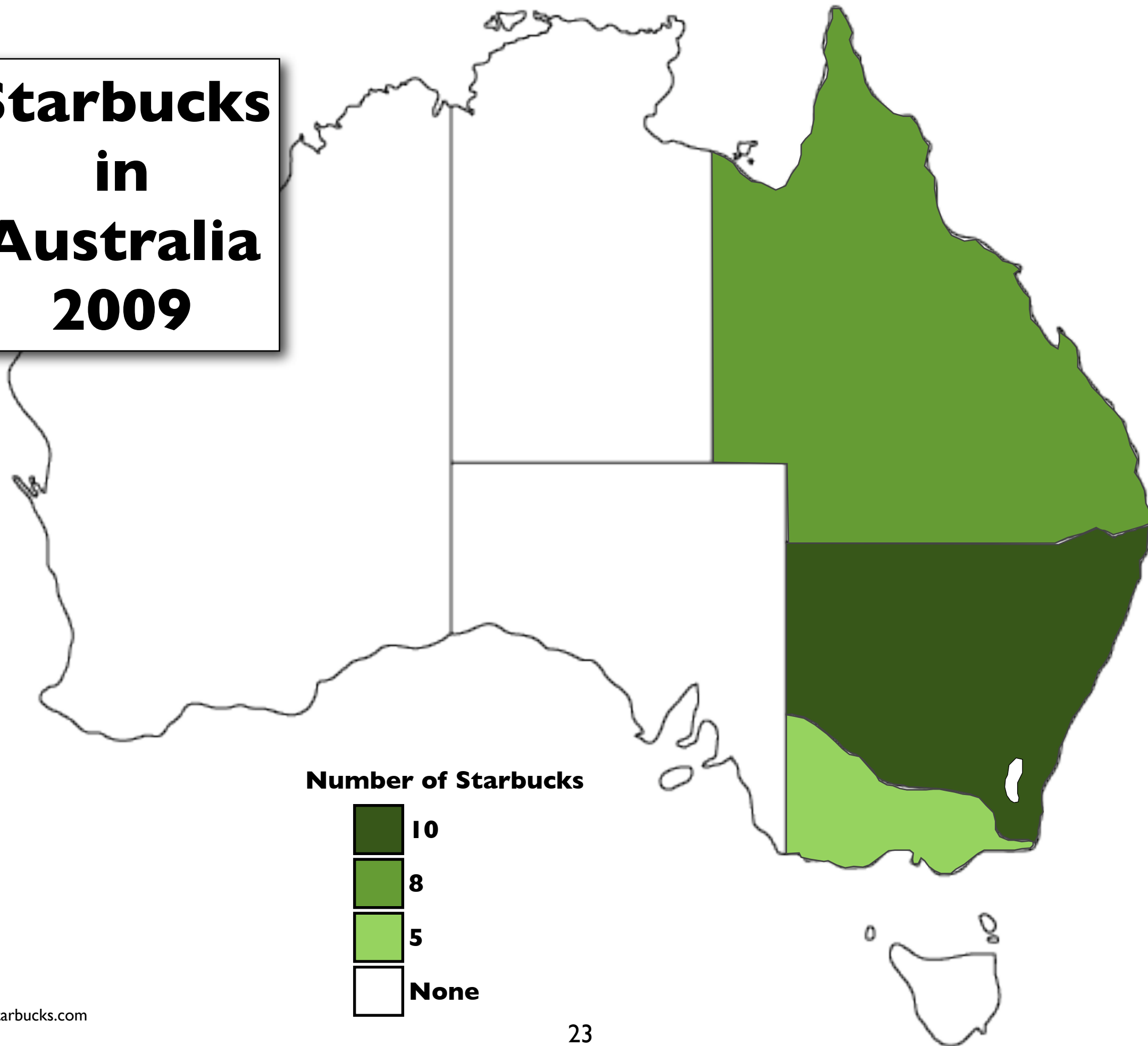
# Comparing Maps

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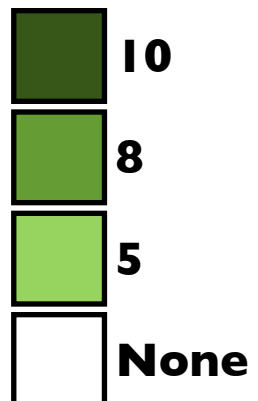
When is it best to use a dot, a choropleth, a graduated circle, or a cartogram?



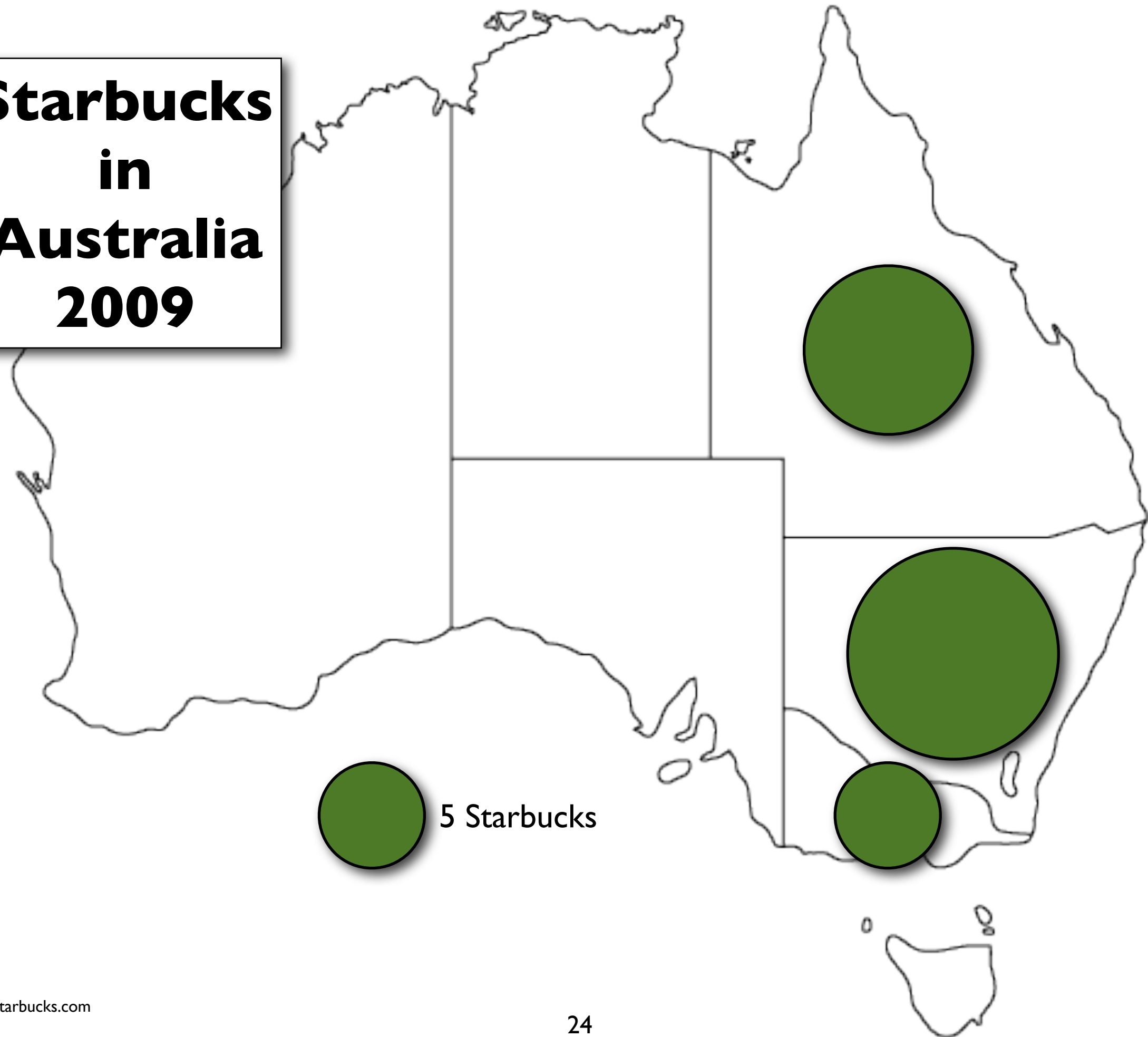
# Starbucks in Australia 2009



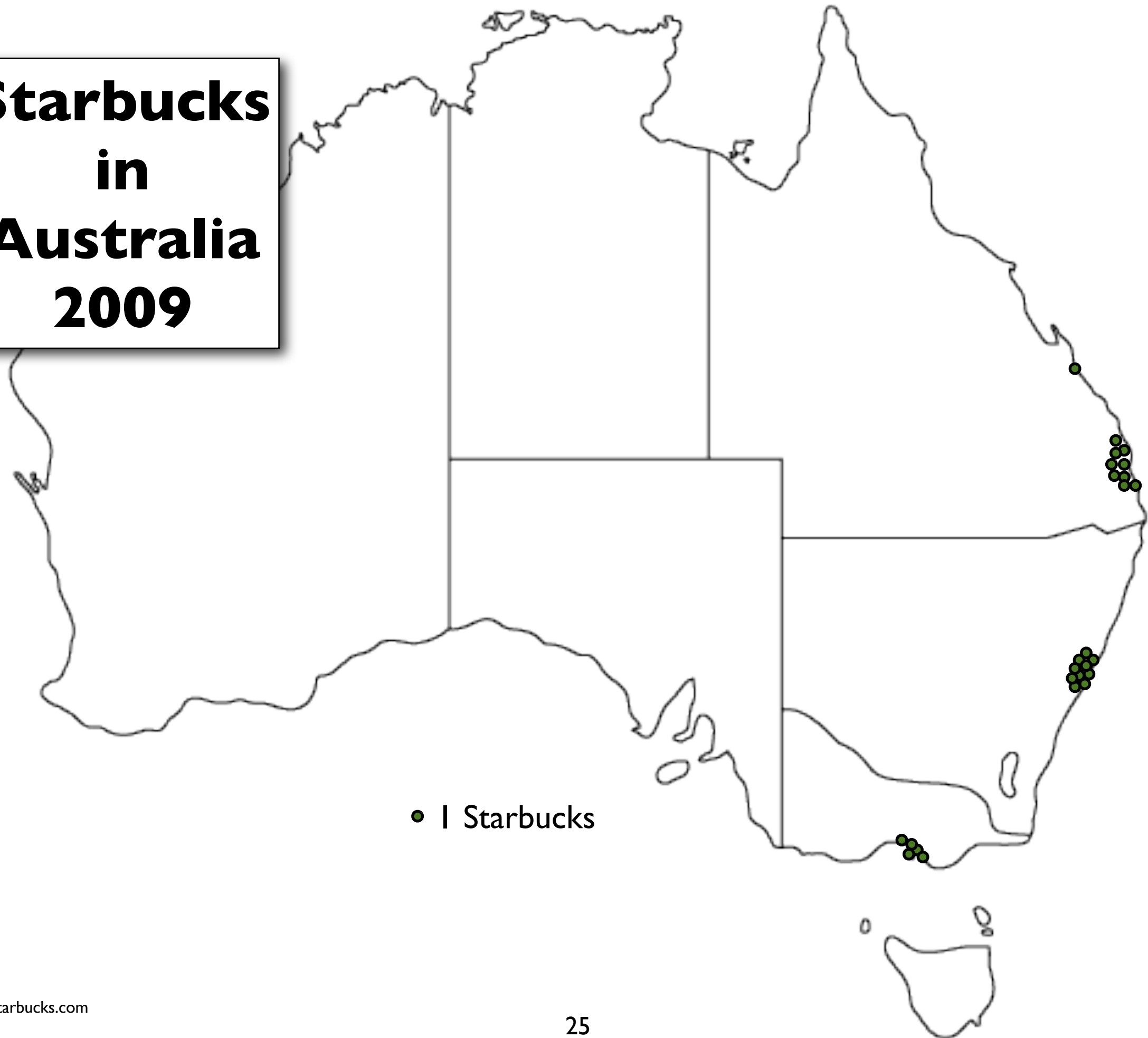
Number of Starbucks

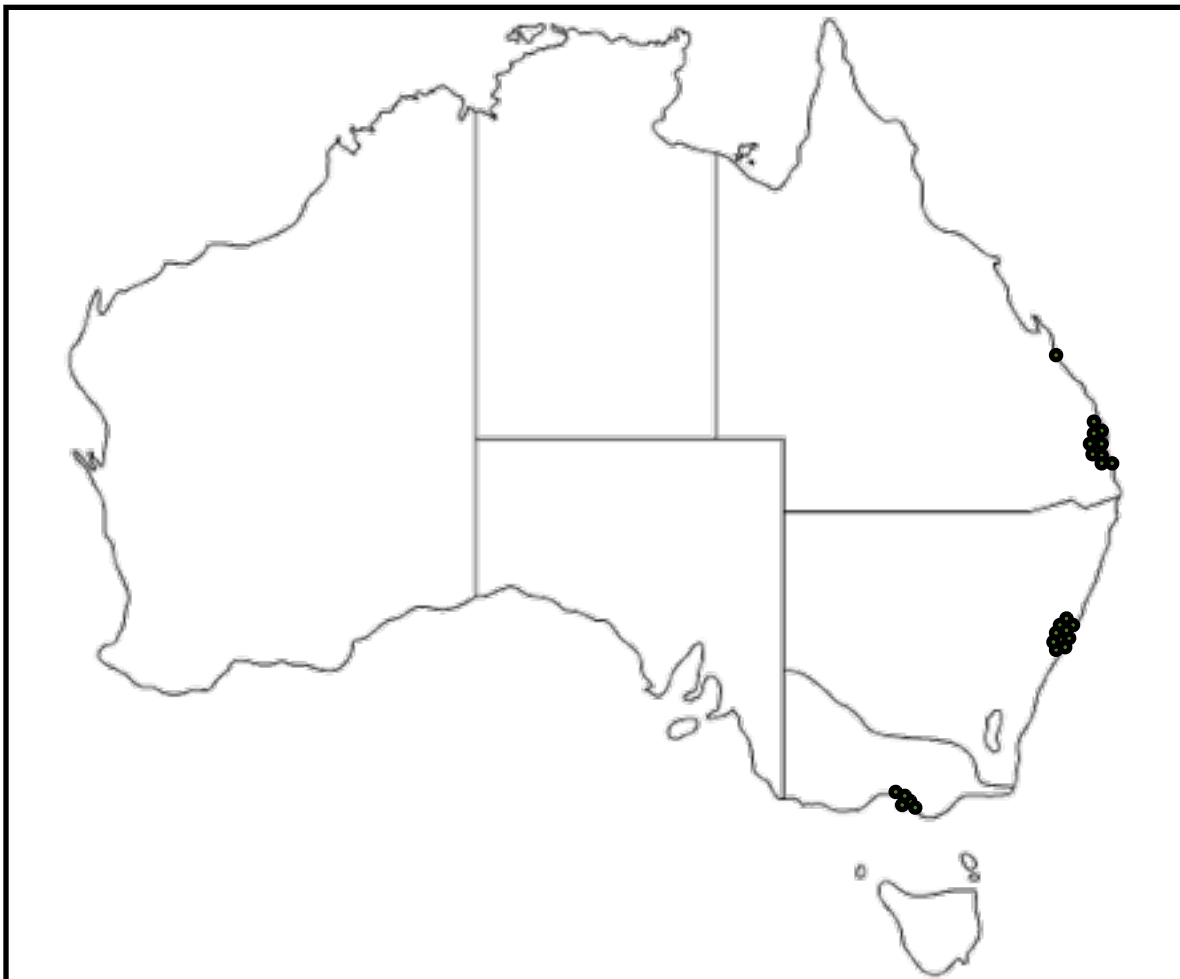
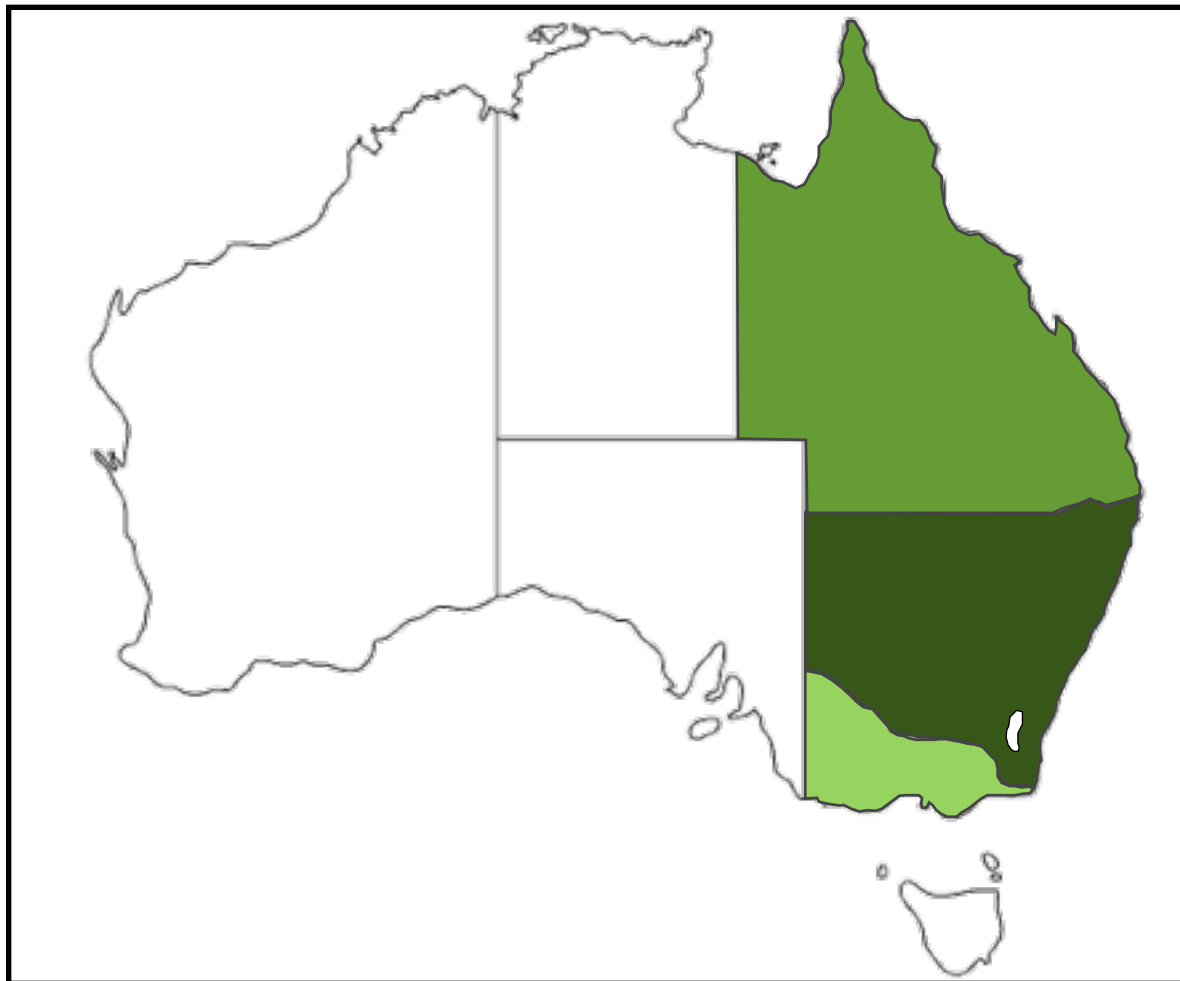


# Starbucks in Australia 2009



# Starbucks in Australia 2009





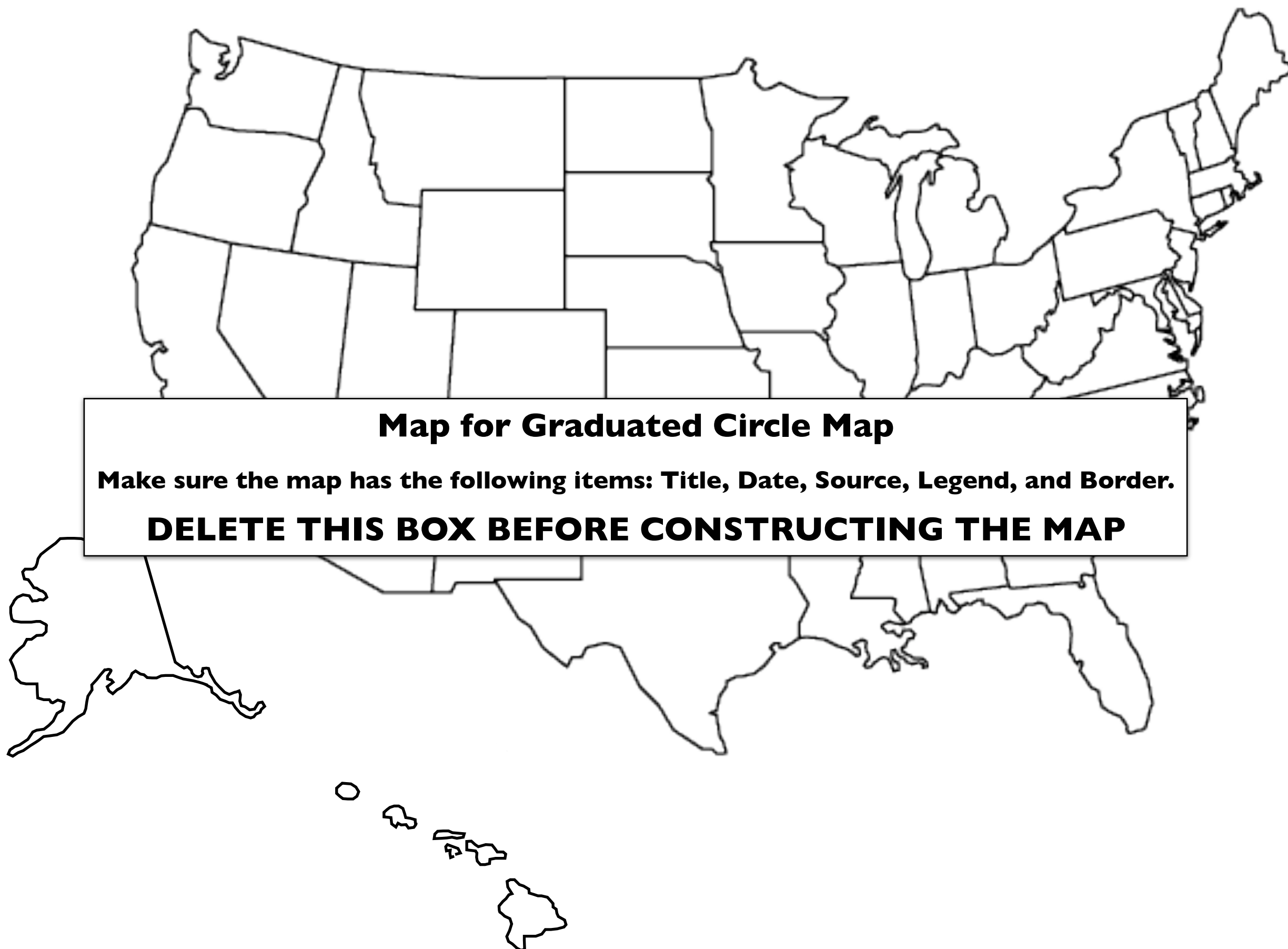
What are the pros and cons for each map?

Which one in your opinion is the best for showing the number of Starbucks?

# The Assignment

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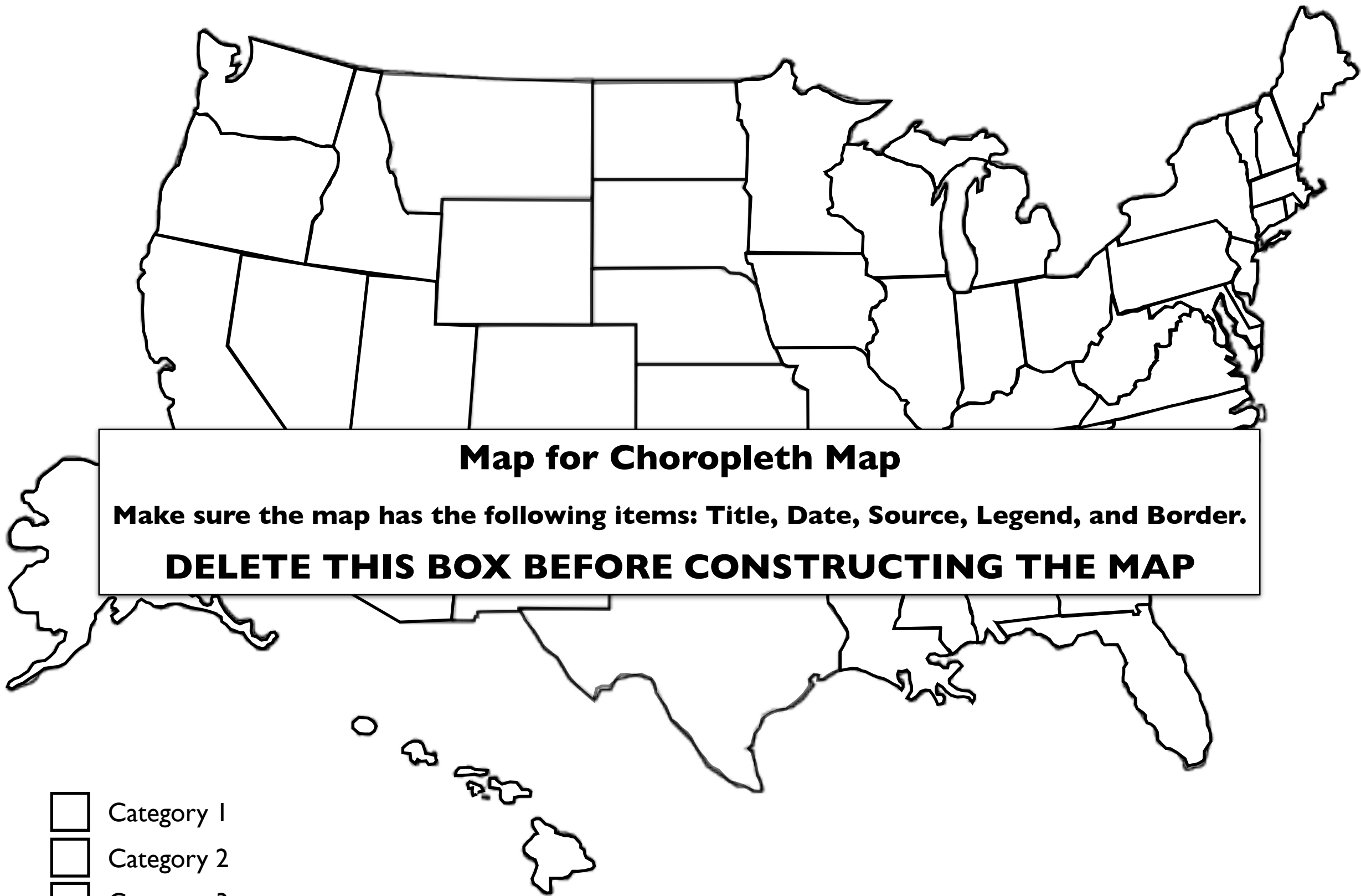
Complete the next four slides...



## **Map for Graduated Circle Map**

**Make sure the map has the following items: Title, Date, Source, Legend, and Border.**

**DELETE THIS BOX BEFORE CONSTRUCTING THE MAP**



## Map for Choropleth Map

**Make sure the map has the following items: Title, Date, Source, Legend, and Border.**

**DELETE THIS BOX BEFORE CONSTRUCTING THE MAP**

- ☐ Category 1
- ☐ Category 2
- ☐ Category 3
- ☐ Category 4
- ☐ Category 5
- ☐ Category 6

Mapping Analysis... Double click in each box to give the pros and cons for each map.

Types of Maps

Pros

Cons

Choropleth

Graduated  
Circle

Dot



**Mapping Questions... Double click in the box to answer the question.**

Explain which Starbucks map does the best job of showing where Starbucks are found in the United States.

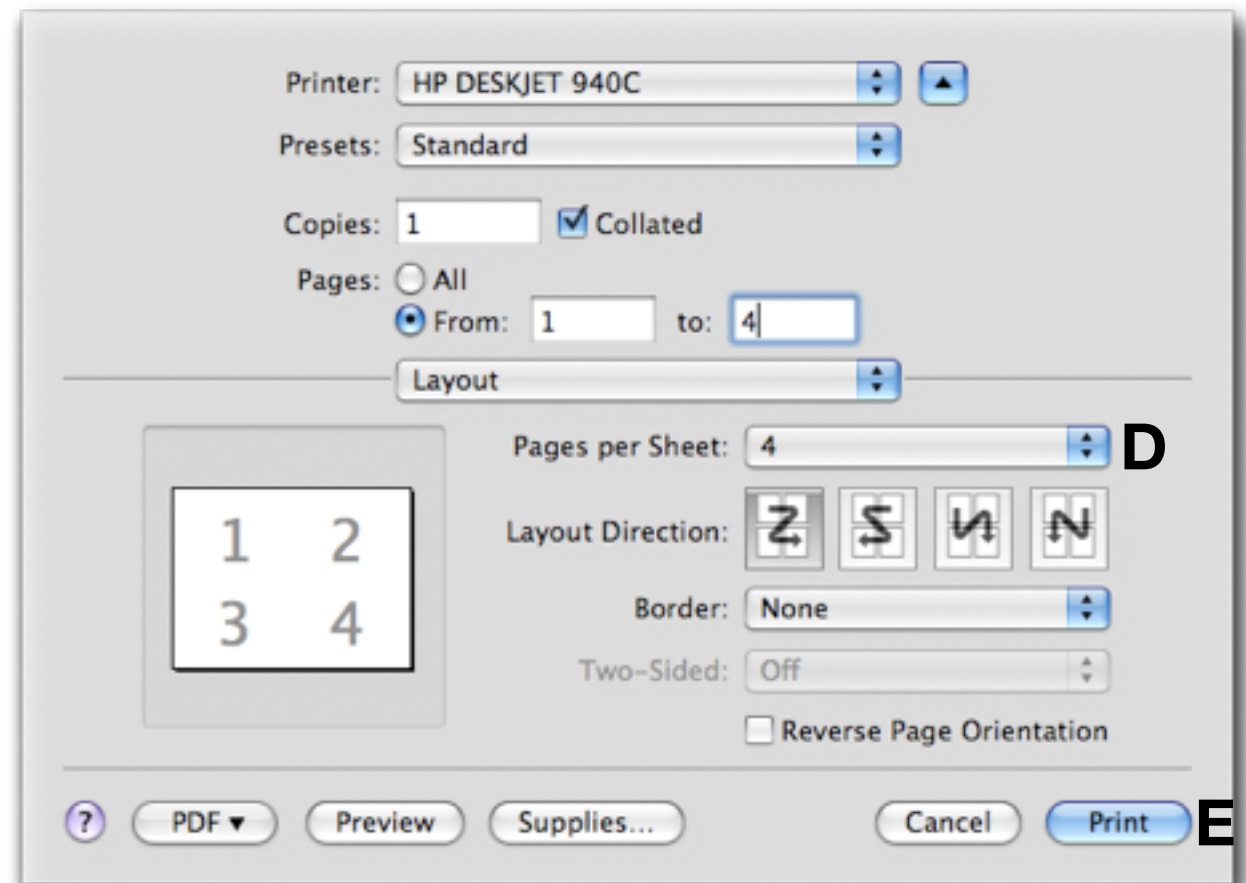
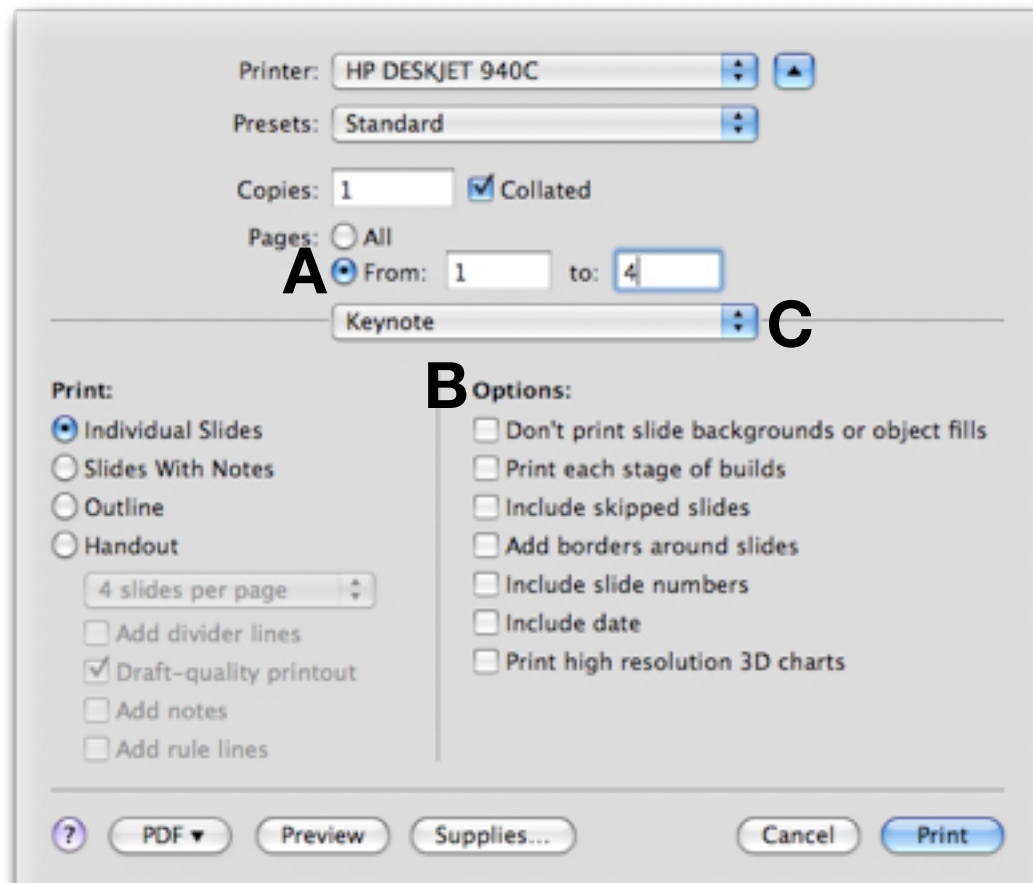
Explain which Starbucks map does the worst job of showing where Starbucks are found in the United States.

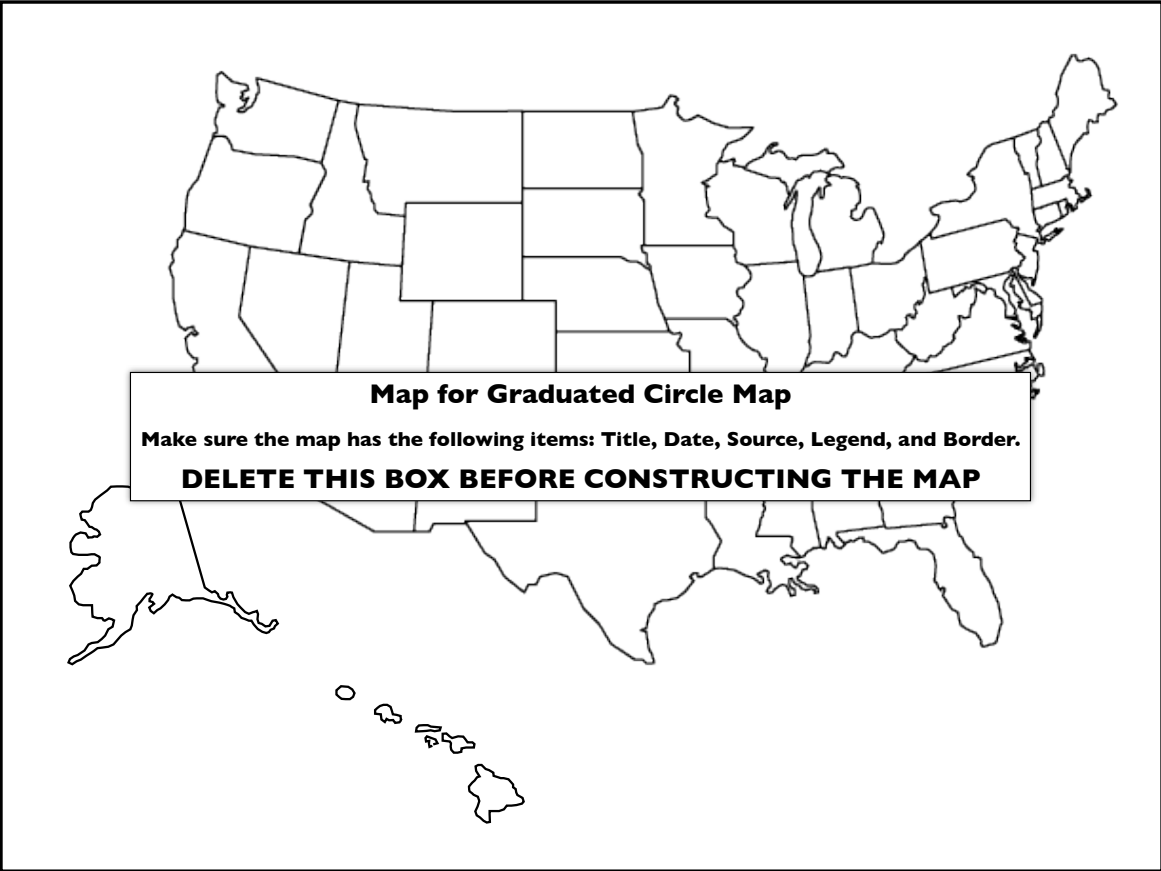
How could one or more of the maps be misleading in showing where Starbucks are found in the United States?

## Directions for Keynote Only

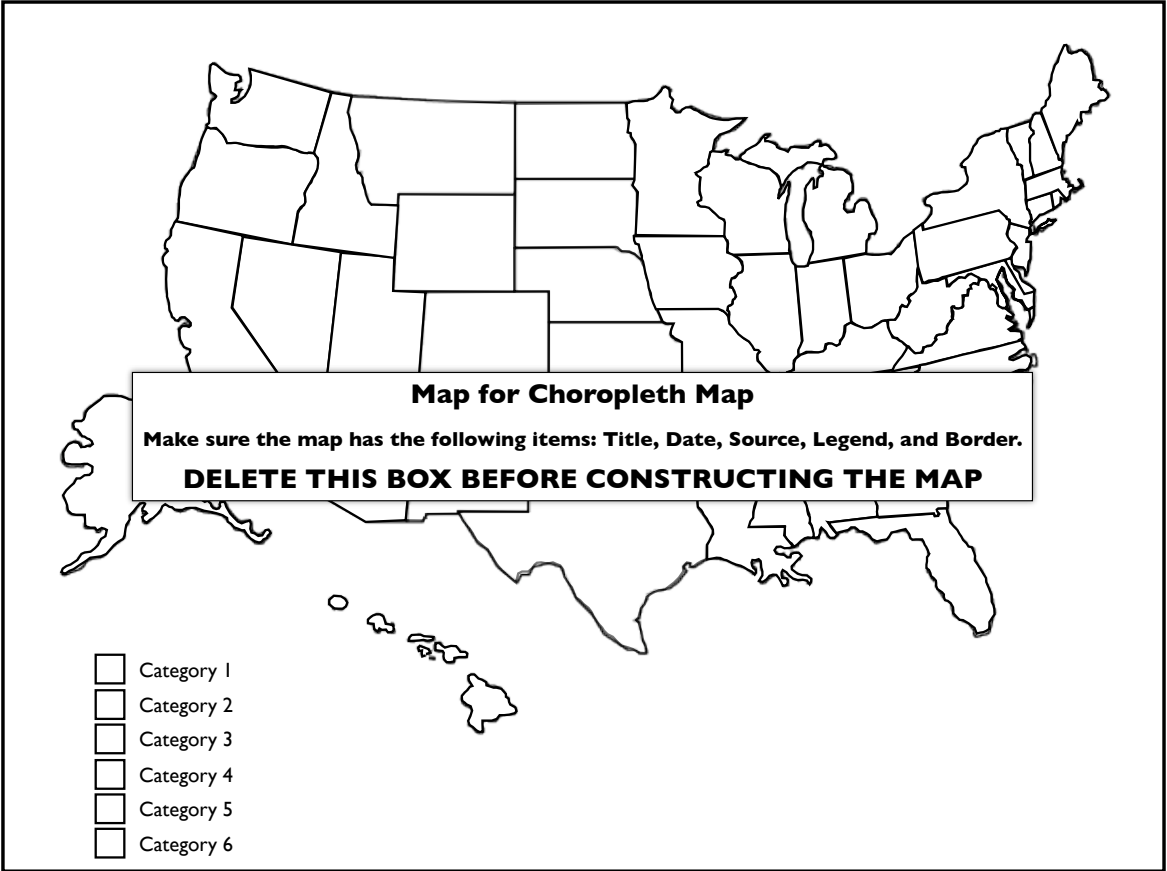
# Printing Maps and Answers to Questions

- Go to **File > Print**
- Click on **From** and type in **1 to 4 (A)**
- Uncheck all boxes under **Options (B)**
- Click on **Keynote (C)** and select **Layout** and then select **4 (C)** Pages per Sheet
- Click **Print (D)**





**Map for Graduated Circle Map**  
Make sure the map has the following items: Title, Date, Source, Legend, and Border.  
**DELETE THIS BOX BEFORE CONSTRUCTING THE MAP**



**Map for Choropleth Map**  
Make sure the map has the following items: Title, Date, Source, Legend, and Border.  
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- ☐ Category 1
- ☐ Category 2
- ☐ Category 3
- ☐ Category 4
- ☐ Category 5
- ☐ Category 6

**Example of Printed Assignment**

Mapping Analysis... Double click in each box to give the pros and cons for each map.		
Types of Maps	Pros	Cons
Choropleth		
Graduated Circle		
Dot		

Mapping Questions... Double click in the box to answer the question.	
Explain which Starbucks map does the best job of showing where Starbucks are found in the United States.	
Explain which Starbucks map does the worst job of showing where Starbucks are found in the United States.	
How could one or more of the maps be misleading in showing where Starbucks are found in the United States?	

# Statistics needed for Graduated Circle Map

State	Starbucks #	pi	Area	Radius Squared	Radius	Circle Size
AL	67	3.141593	52.62167695	16.75	4.092676386	0.4092676
AK	35	3.141593	27.48893572	8.75	2.958039892	0.295804
AR	367	3.141593				
AK	37	3.141593				
CA	2418	3.141593				
CO	406	3.141593				
CT	108	3.141593				
DE	18	3.141593				
DC	77	3.141593				
FL	605	3.141593				
GA	273	3.141593				
HI	83	3.141593				
ID	53	3.141593				
IL	523	3.141593				
IN	186	3.141593				
IA	56	3.141593				
KA	63	3.141593				
KY	81	3.141593				
LA	67	3.141593				
ME	27	3.141593				
MD	230	3.141593				
MA	192	3.141593				
MI	215	3.141593				
MN	124	3.141593				
MS	22	3.141593				
MO	138	3.141593				
MT	16	3.141593				
NE	37	3.141593				
NV	238	3.141593				
NH	20	3.141593				
NJ	198	3.141593				
NM	58	3.141593				
NY	513	3.141593				
NC	215	3.141593				
ND	11	3.141593				
OH	288	3.141593				
OK	71	3.141593				
OR	322	3.141593				
PA	258	3.141593				
RI	24	3.141593				
SC	71	3.141593				
SD	18	3.141593				
TN	134	3.141593				
TX	811	3.141593				
UT	63	3.141593				
VT	4	3.141593				
VA	363	3.141593				
WA	664	3.141593				
WV	17	3.141593				
WI	108.00	3.141593				
WY	15.00	3.141593				

**Alternative Option**  
 Copy the statistics in an  
 Excel document for the  
 graduated circle map. In  
 order to use this option you  
 will need to know how to  
 use formulas in Excel.

AL	67	3.141593
AK	35	3.141593
AR	367	3.141593
AK	37	3.141593
CA	2418	3.141593
CO	406	3.141593
CT	108	3.141593
DE	18	3.141593
DC	77	3.141593
FL	605	3.141593
GA	273	3.141593
HI	83	3.141593
ID	53	3.141593
IL	523	3.141593
IN	186	3.141593
IA	56	3.141593
KA	63	3.141593
KY	81	3.141593
LA	67	3.141593
ME	27	3.141593
MD	230	3.141593
MA	192	3.141593
MI	215	3.141593
MN	124	3.141593
MS	22	3.141593
MO	138	3.141593
MT	16	3.141593
NE	37	3.141593
NV	238	3.141593
NH	20	3.141593
NJ	198	3.141593
NM	58	3.141593
NY	513	3.141593
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SD	18	3.141593
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TX	811	3.141593
UT	63	3.141593
VT	4	3.141593
VA	363	3.141593
WA	664	3.141593
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WI	108.00	3.141593
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# Graduated Circle Map Directions

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- **Step 1** - Divide the state's number of Starbucks by  $4^*$  and then multiply the answer by 3.141593 (pi). This will give the **area** for the circle.\*\*

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- **Step 2** - Divide the **area** by 3.141593 (pi) to determine the **radius squared**.

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- **Step 2** - Divide the **area** by 3.141593 (pi) to determine the **radius squared**.
- **Step 3** - Take the square root of the radius squared to determine the **radius** of the circle.

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- **Step 1** - Divide the state's number of Starbucks by 4\* and then multiply the answer by 3.141593 (pi). This will give the **area** for the circle.\*\*
- **Step 2** - Divide the **area** by 3.141593 (pi) to determine the **radius squared**.
- **Step 3** - Take the square root of the radius squared to determine the **radius** of the circle.
- **Step 4** - The radius will be used as the size of the circle. In order to make sure the circle size will not be too big for the map, multiply each state's radius by 0.1. For example this will makes California's circle size 2.459 inches instead of 24.59 inches. .

# Graduated Circle Map Directions

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- **Step 1** - Divide the state's number of Starbucks by 4\* and then multiply the answer by 3.141593 (pi). This will give the **area** for the circle.\*\*
- **Step 2** - Divide the **area** by 3.141593 (pi) to determine the **radius squared**.
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\*Each state's number of Starbucks will be divided by 4 because it is the lowest number of Starbucks of any state (Vermont). \*\*The circle size for each state will be proportional to Vermont, which has a radius of 1.

# Graduated Circle Map Drawing the Circles

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# Graduated Circle Map Drawing the Circles

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## Step 1

Under **Shapes** select the circle shape: 

# Graduated Circle Map Drawing the Circles

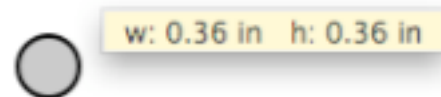
---

## Step 1

Under **Shapes** select the circle shape: 

## Step 2


Hold down the **Shift** key and draw the circle to size.  
Draw the smallest circles first.



# Graduated Circle Map Drawing the Circles

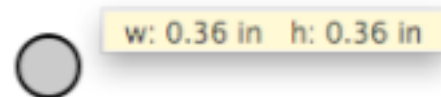
---

## Step 1

Under **Shapes** select the circle shape: 

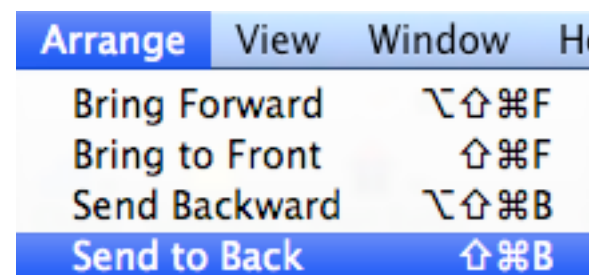
## Step 2

Hold down the **Shift** key and draw the circle to size.  
Draw the smallest circles first.



## Step 3

Drag the circle to the center of the state.  
If the circle covers up another circle use the  
**Send to Back** feature under **Arrange**.



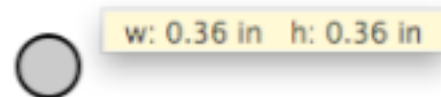
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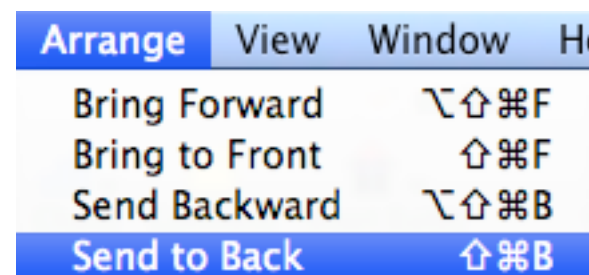
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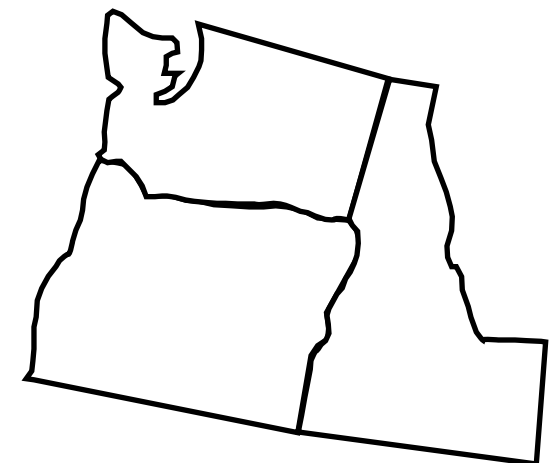
## Step 3

Drag the circle to the center of the state.  
If the circle covers up another circle use the  
**Send to Back** feature under **Arrange**.



## Example

State	Circle Size
Idaho	0.36
Oregon	0.88
Washington	1.29





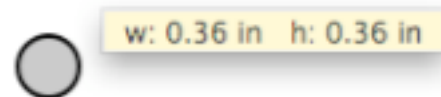
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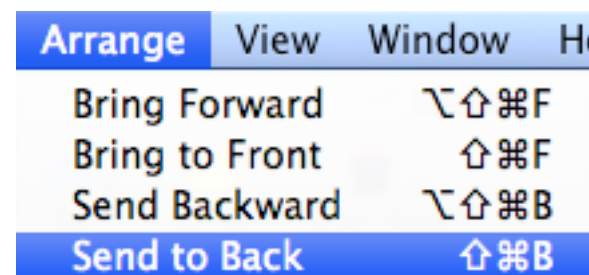
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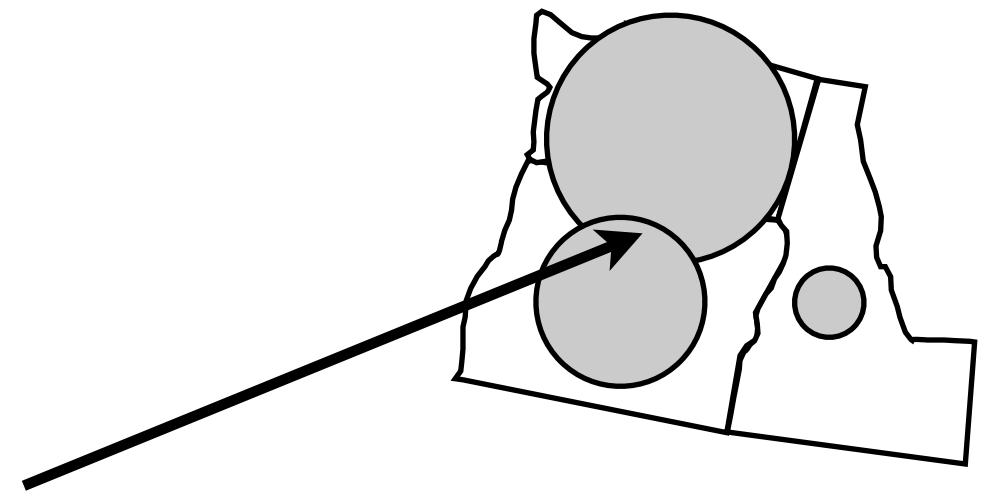
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Idaho	0.36
Oregon	0.88
Washington	1.29



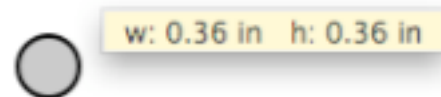
# Graduated Circle Map Drawing the Circles

## Step 1

Under **Shapes** select the circle shape: 

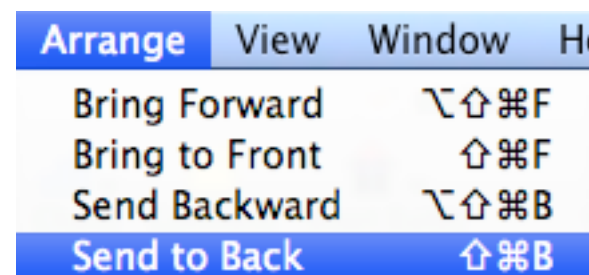
## Step 2

Hold down the **Shift** key and draw the circle to size.  
Draw the smallest circles first.



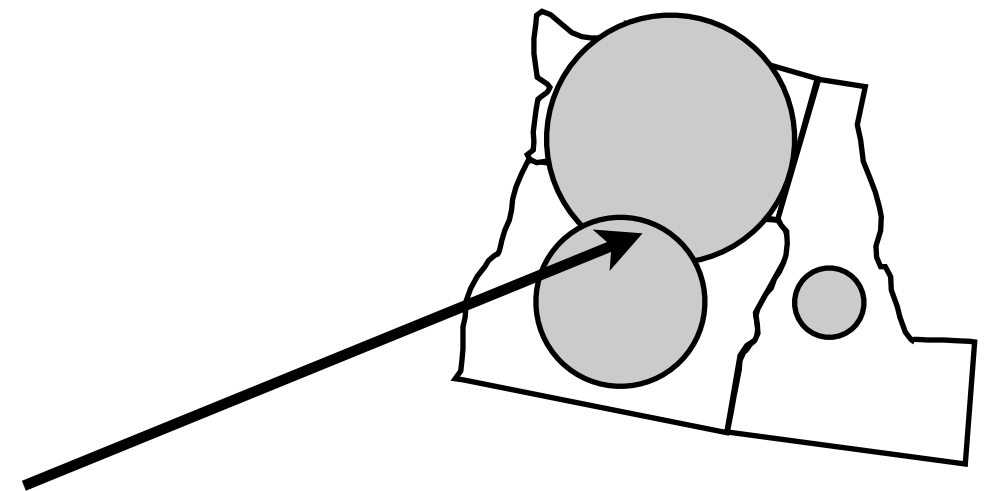
## Step 3

Drag the circle to the center of the state.  
If the circle covers up another circle use the  
**Send to Back** feature under **Arrange**.



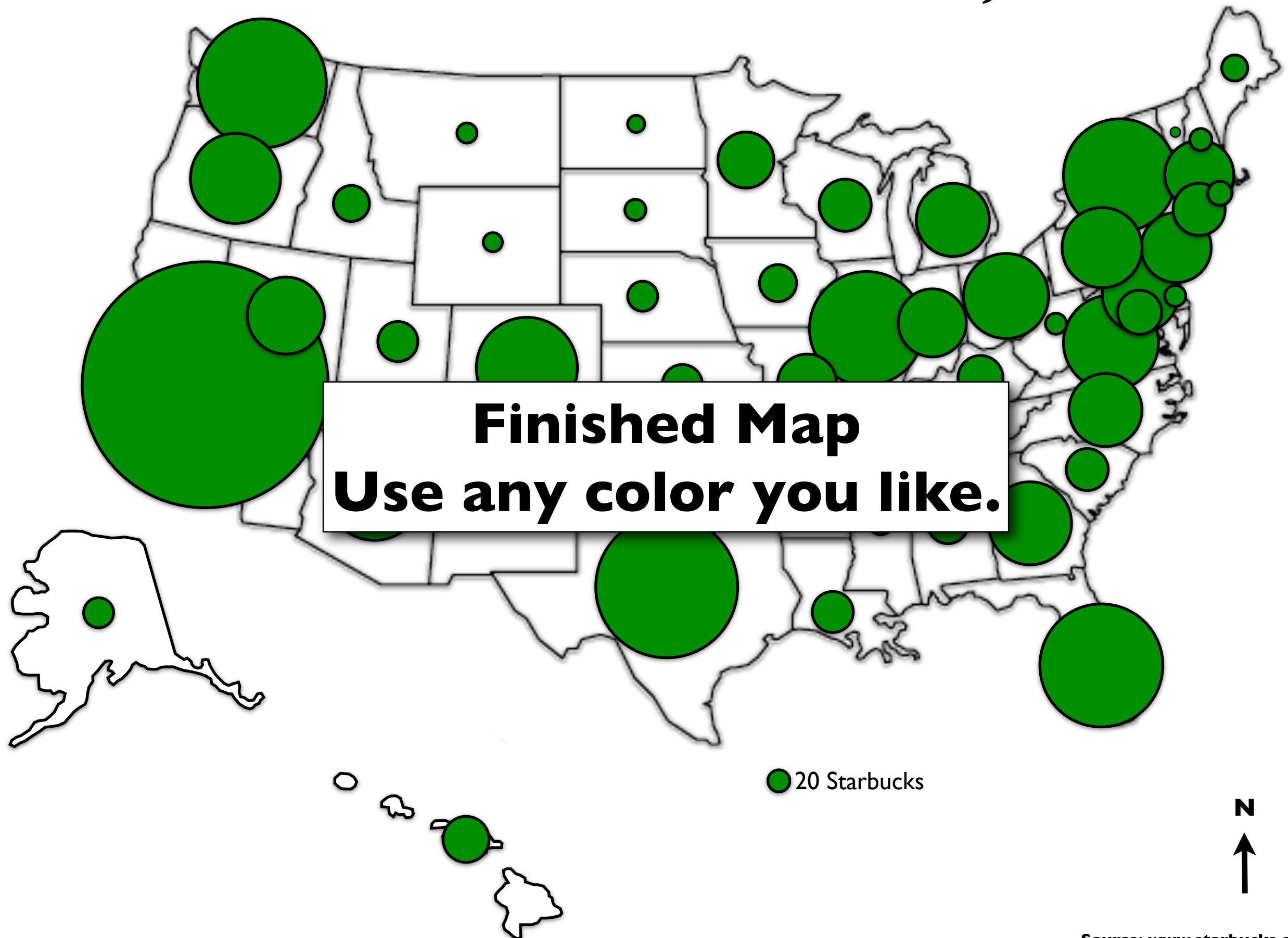
## Example

State	Circle Size
Idaho	0.36
Oregon	0.88
Washington	1.29



The circles can be any color.

# Starbucks Coffee Per State, 2009



Source: [www.starbucks.com](http://www.starbucks.com)

# Directions for Choropleth Map

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# Directions for Choropleth Map

---

- Use the statistics for the number of Starbucks per state in the United States to complete the histogram.

# Directions for Choropleth Map

---

- Use the statistics for the number of Starbucks per state in the United States to complete the histogram.
- Using the completed histogram determine between 4 to 6 categories for the data.

# Directions for Choropleth Map

---

- Use the statistics for the number of Starbucks per state in the United States to complete the histogram.
- Using the completed histogram determine between 4 to 6 categories for the data.
- Using the map of the United States construct a map for the statistics.

# Directions for Choropleth Map

---

- Use the statistics for the number of Starbucks per state in the United States to complete the histogram.
- Using the completed histogram determine between 4 to 6 categories for the data.
- Using the map of the United States construct a map for the statistics.
- Make sure the map has the following items: Title, Date, Source, North Arrow, Legend, and Border. The color scheme for the map should go from dark to light of similar colors.

# Selecting colors for the Choropleth Map

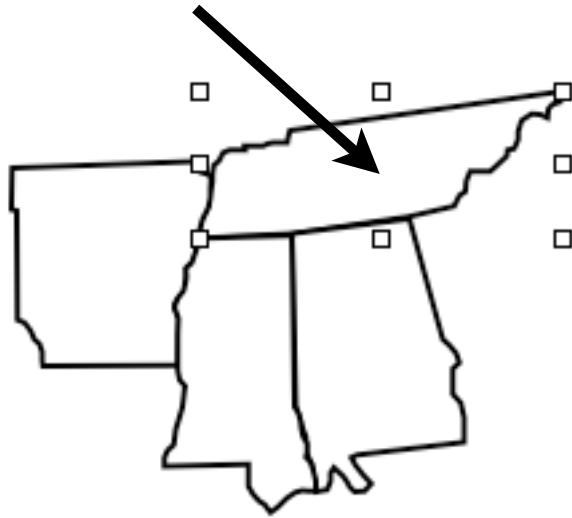
---



# Selecting colors for the Choropleth Map

# Step 1

Click **once** on the state.

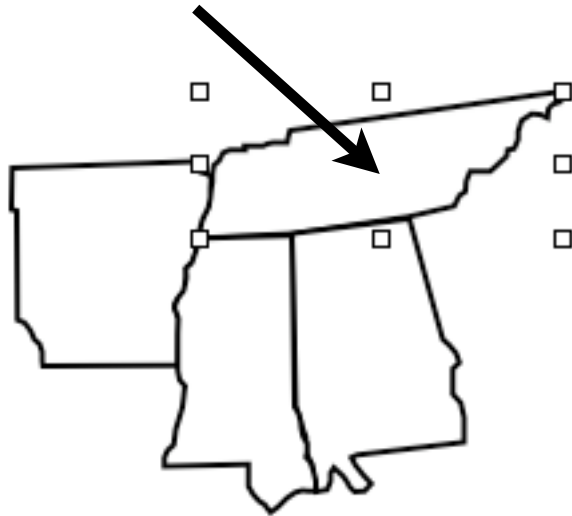


# Selecting colors for the Choropleth Map

---

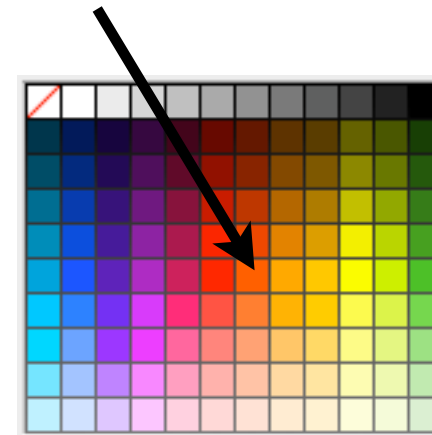
## Step 1

Click **once** on the state.



## Step 2

From **Fill** select the color for the state.

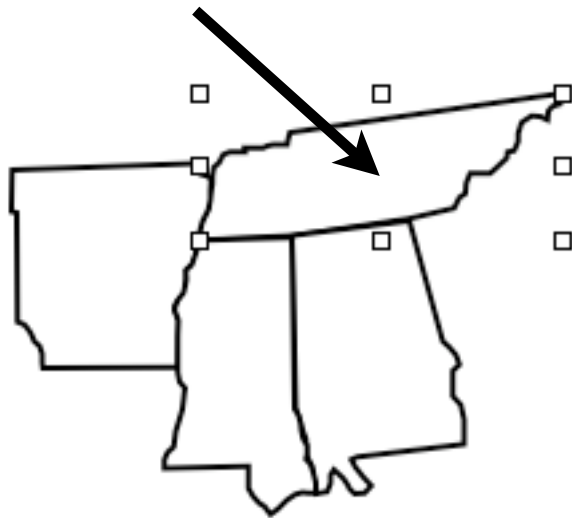


# Selecting colors for the Choropleth Map

---

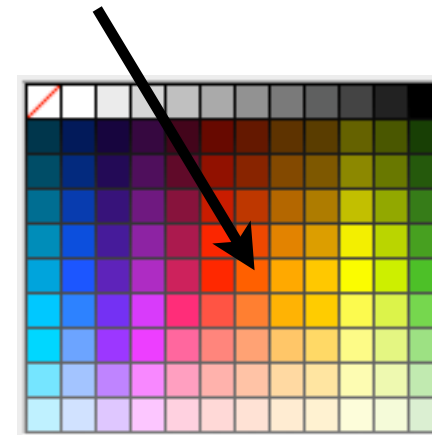
## Step 1

Click **once** on the state.



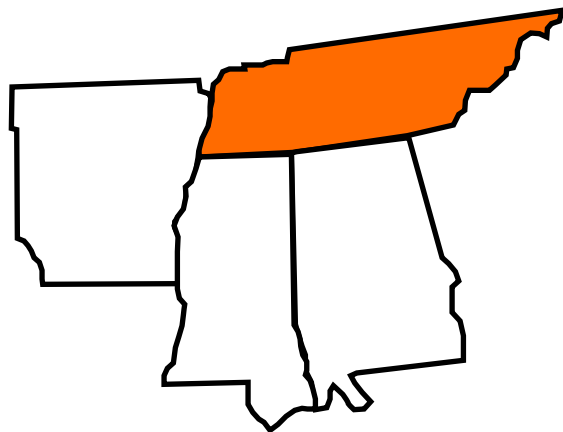
## Step 2

From **Fill** select the color for the state.



## Step 3

The state will turn into the color selected.

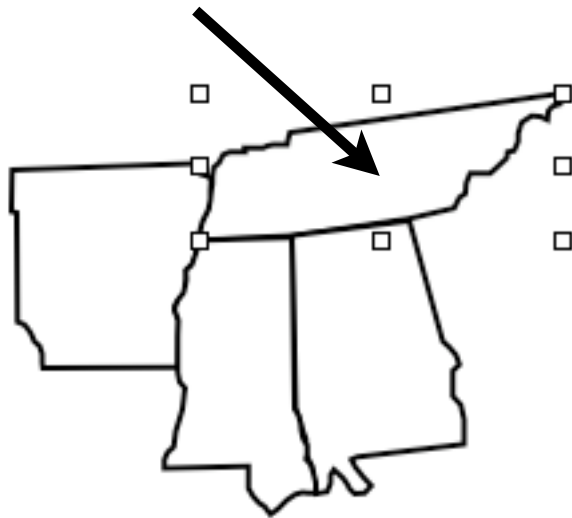


# Selecting colors for the Choropleth Map

---

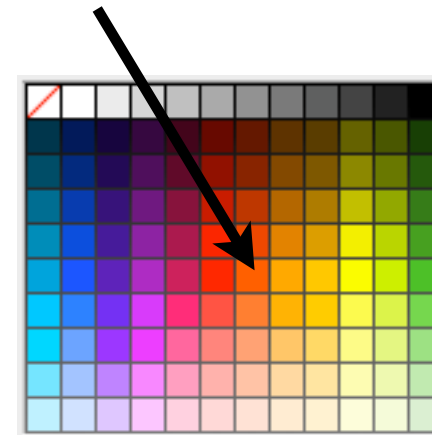
## Step 1

Click **once** on the state.



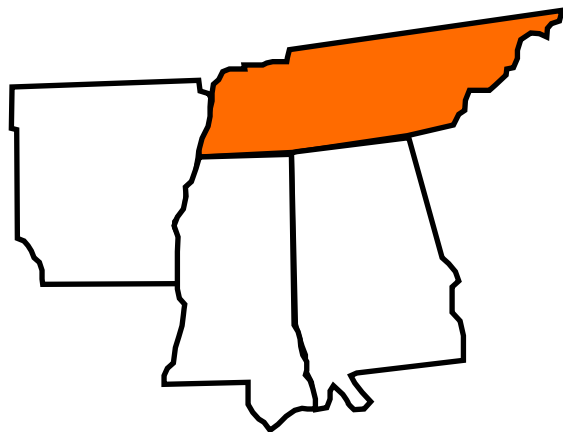
## Step 2

From **Fill** select the color for the state.



## Step 3

The state will turn into the color selected.



## Use Shades of Similar Colors



# Statistics needed for Choropleth map.

States	Total Starbucks per State March 2009	Total Population est. 2008
Alabama	67	4,661,900
Alaska	35	686,293
Arizona	367	6,500,180
Arkansas	37	2,855,390
California	2418	36,756,666
Colorado	406	4,939,456
Connecticut	108	3,501,252
Delaware	18	873,092
District of Columbia	77	591,833
Florida	605	18,328,340
Georgia	273	9,685,744
Hawaii	83	1,288,198
Idaho	53	1,523,816
Illinois	523	12,901,563
Indiana	186	6,376,792
Iowa	56	3,002,555
Kansas	63	2,802,134
Kentucky	81	4,269,245
Louisiana	67	4,410,796
Maine	27	1,316,456
Maryland	230	5,633,597
Massachusetts	192	6,497,967
Michigan	215	10,003,422
Minnesota	124	5,220,393
Mississippi	22	2,938,618
Missouri	138	5,911,605
Montana	16	967,440
Nebraska	37	1,783,432
Nevada	238	2,600,167
New Hampshire	20	1,315,809
New Jersey	198	8,682,661
New Mexico	58	1,984,356
New York	513	19,490,297
North Carolina	215	9,222,414
North Dakota	11	641,481
Ohio	288	11,485,910
Oklahoma	71	3,642,361
Oregon	322	3,790,060
Pennsylvania	258	12,448,279
Rhode Island	24	1,050,788
South Carolina	71	4,479,800
South Dakota	18	804,194
Tennessee	134	6,214,888
Texas	811	24,326,974
Utah	63	2,736,424
Vermont	4	621,270
Virginia	363	7,769,089
Washington	664	6,549,224
West Virginia	17	1,814,468
Wisconsin	108	5,627,967
Wyoming	15	532,668



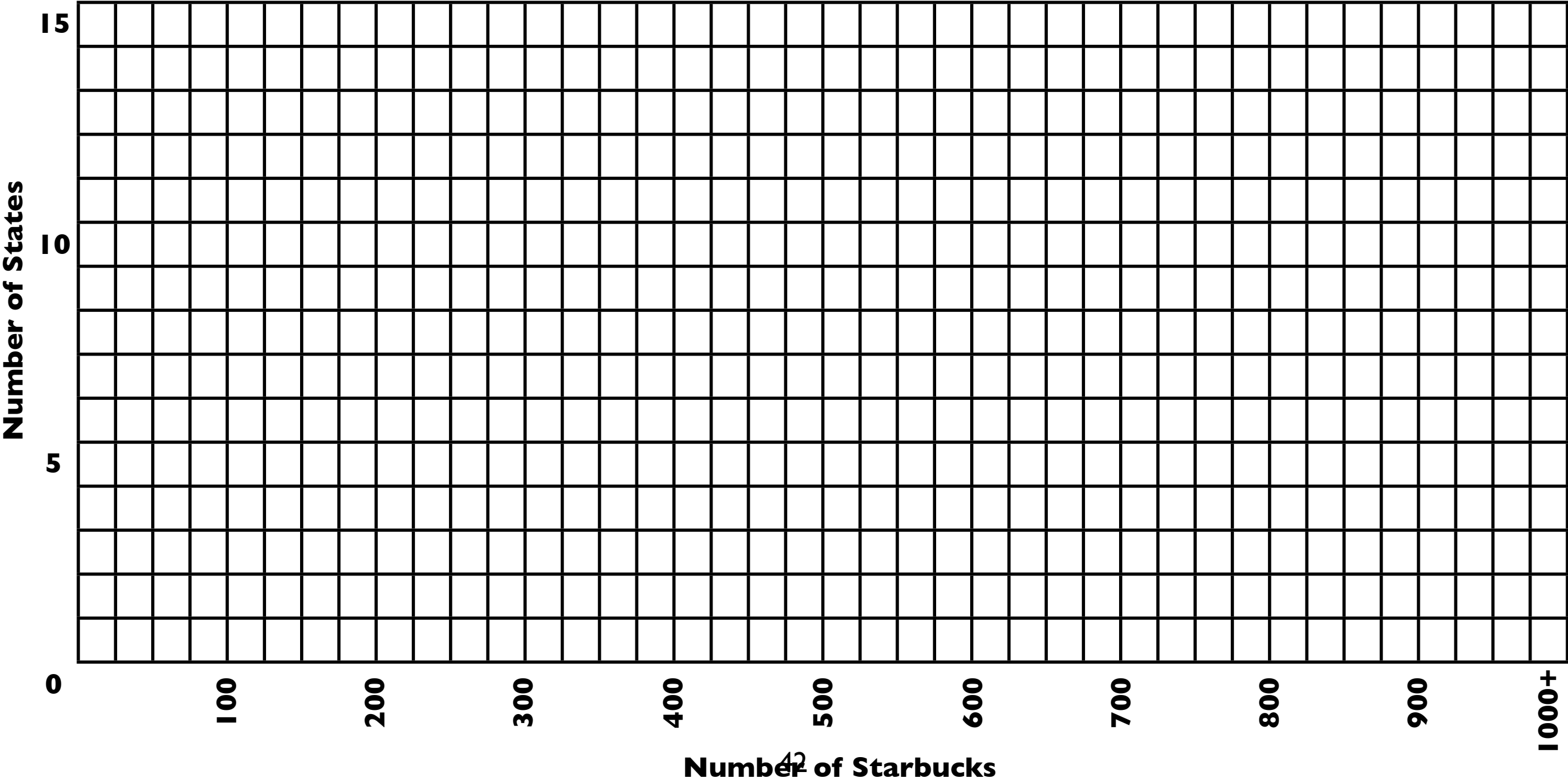
Name: \_\_\_\_\_

**Choropleth Mapping Activity**

- 1. Use the statistics for the number of Starbucks per state in the United States to complete the histogram below.
- 2. Using the completed histogram determine between 4 to 6 categories for the data.
- 3. Using the map on the next slide (page) construct a map for the statistics.
- 4. Make sure the map has the following items: Title, Date, Source, Legend, and Border.  
The color scheme for the map should go from dark to light of similar colors.

Categories

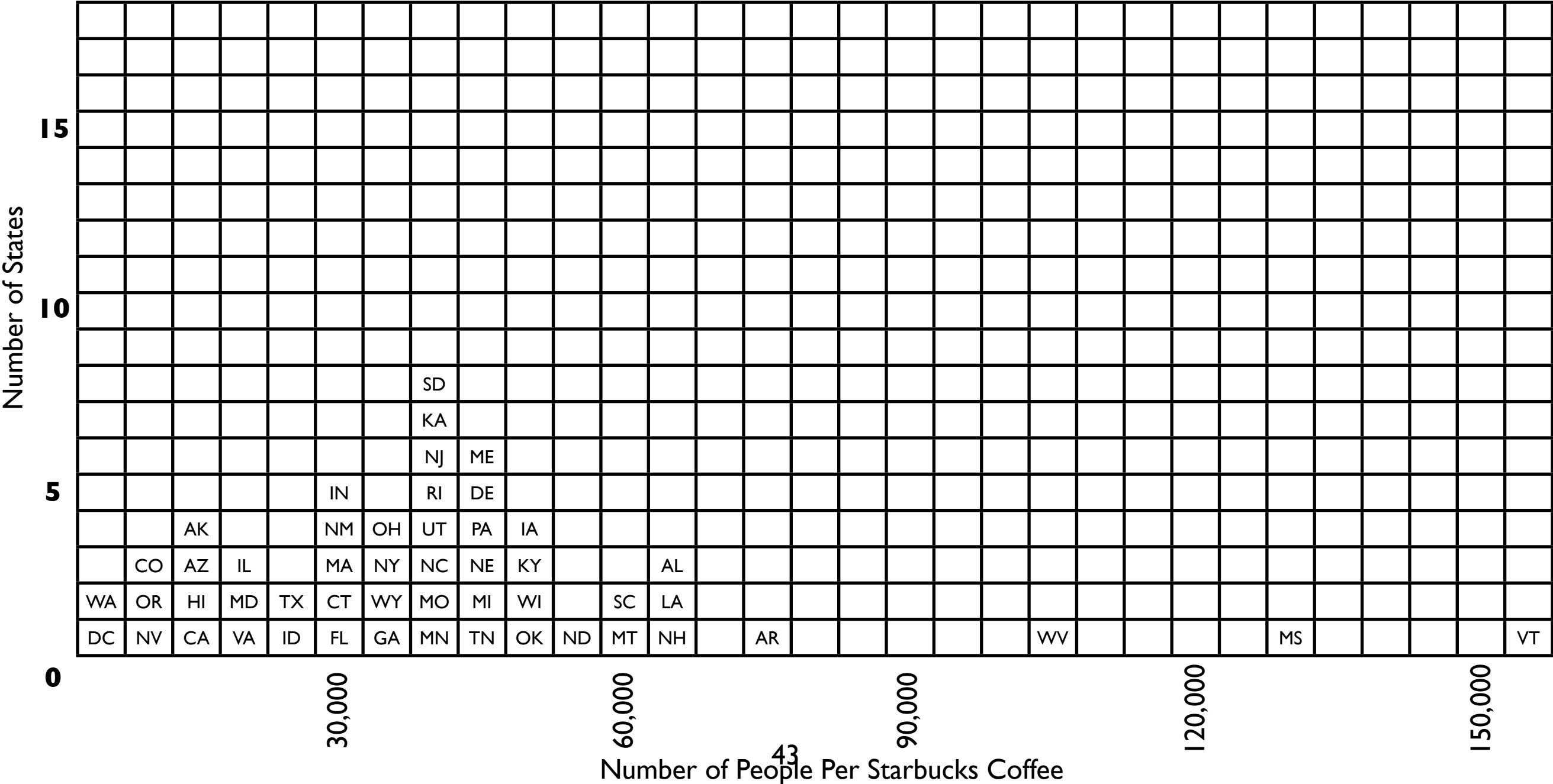
**Histogram for the number of Starbucks per state in the USA**



**Choropleth Mapping Activity**

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

**Histogram for Number of People Per Starbucks, 2008**



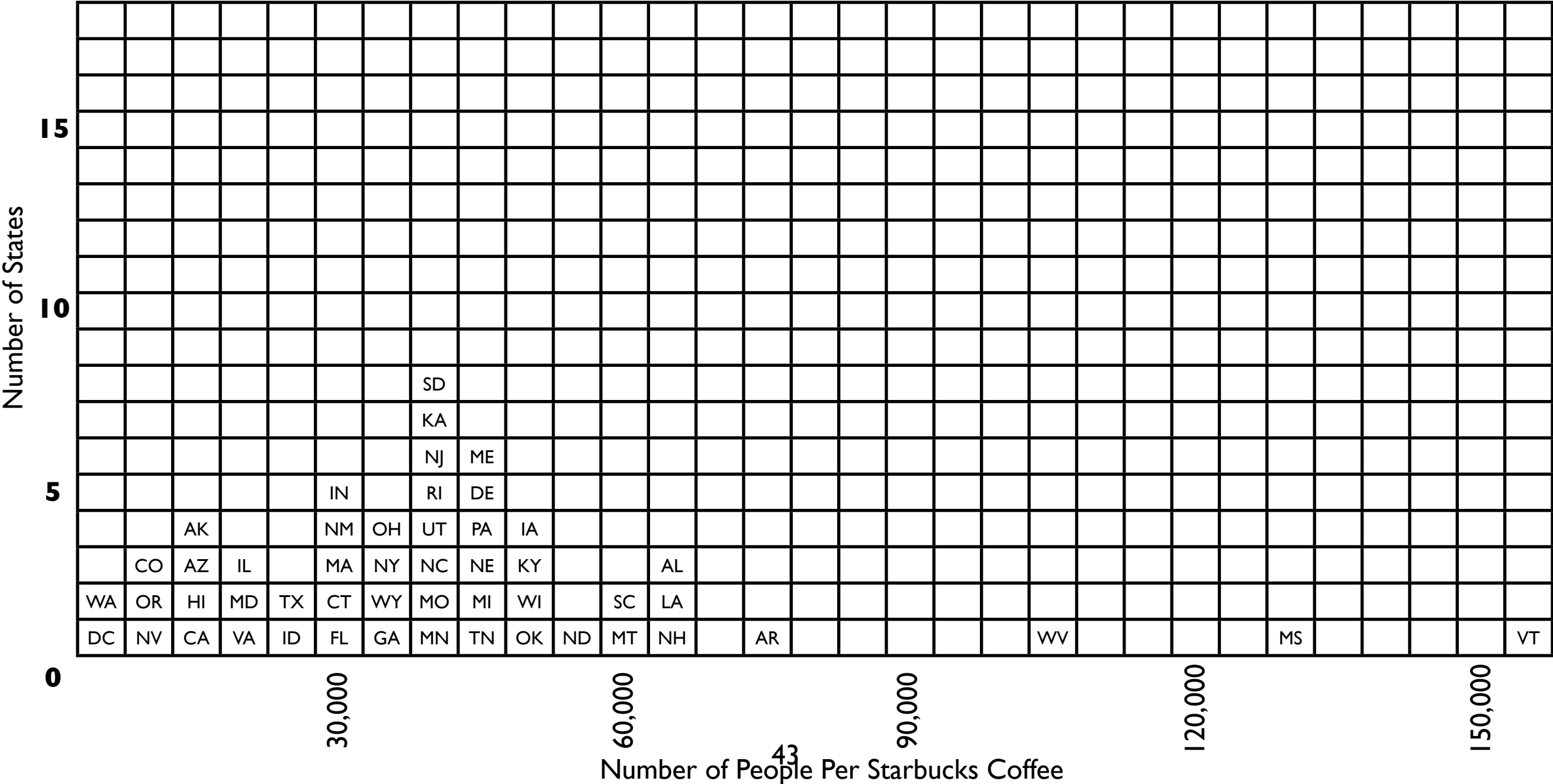
Name: \_\_\_\_\_

# Choropleth Mapping Activity

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

EQUAL INTERVALS
Less Than 30,000
30,000 - 59,999
60,000 - 89,999
90,000 - 119,000
120,000 - 149,999
150,000 +

## Histogram for Number of People Per Starbucks, 2008



**Name:** \_\_\_\_\_

- | <b>EQUAL INTERVALS</b> |
|------------------------|
| Less Than 30,000       |
| 30,000 - 59,999        |
| 60,000 - 89,999        |
| 90,000 - 119,000       |
| 120,000 - 149,999      |
| 150,000 +              |

The dot plot displays the number of Starbucks locations per state. The x-axis represents the 'Number of People Per Starbucks Coffee' (0 to 150,000), and the y-axis represents the 'Number of States' (0 to 15). A vertical orange line is drawn at 30,000. The data points are as follows:

Number of States	State Abbreviations	Approximate Number of People Per Starbucks Coffee
1	DC, NV, CA, VA, ID, FL, GA, MN, TN, OK, ND, MT, NH, AR, WV, MS, VT	~10,000
2	WA, OR, HI, MD, TX, CT, WY, MO, MI, WI, SC, LA	~15,000
3	CO, AZ, IL, NM, OH, UT, PA, IA, MA, NY, NC, NE, KY, AL	~20,000
4	AK, IN, RI, DE	~25,000
5	NJ, ME	~40,000
6	KA	~40,000
7	SD	~40,000

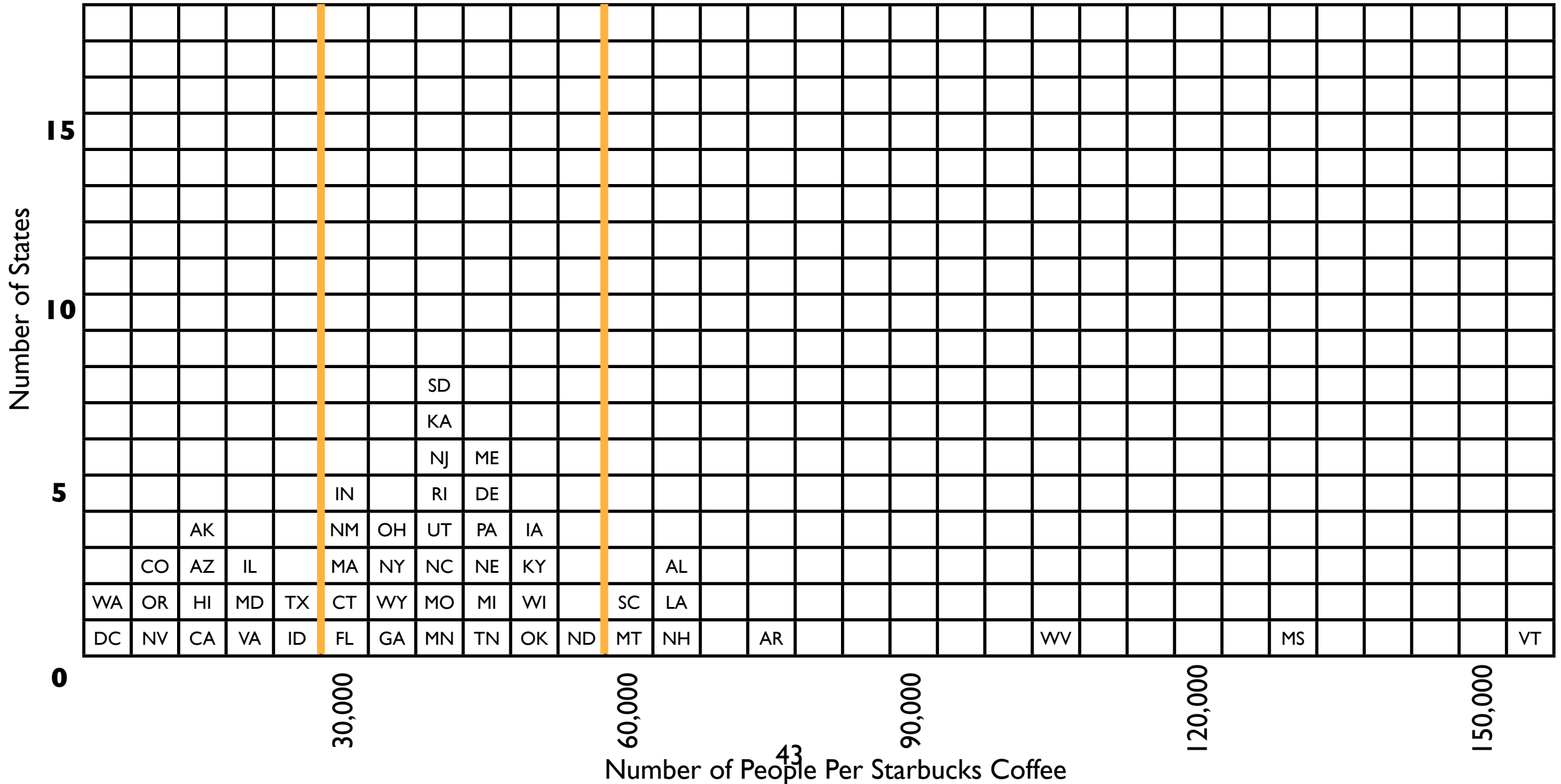
# Choropleth Mapping Activity

**Name:** \_\_\_\_\_

1. Select statistics for the United States on any topic that was covered during the first nine weeks.
2. Complete a histogram for the statistics.
3. Using the completed histogram determine between 4 and 6 categories for the data.
4. Using the map from the Keynote document construct a map for the statistics.
5. Make sure the map has the following items: Title, Date, Source, Legend, and Border. The color scheme for the map should go from dark to light of similar colors.

<b>EQUAL INTERVALS</b>
Less Than 30,000
30,000 - 59,999
60,000 - 89,999
90,000 - 119,000
120,000 - 149,999
150,000 +

## Histogram for Number of People Per Starbucks, 2008



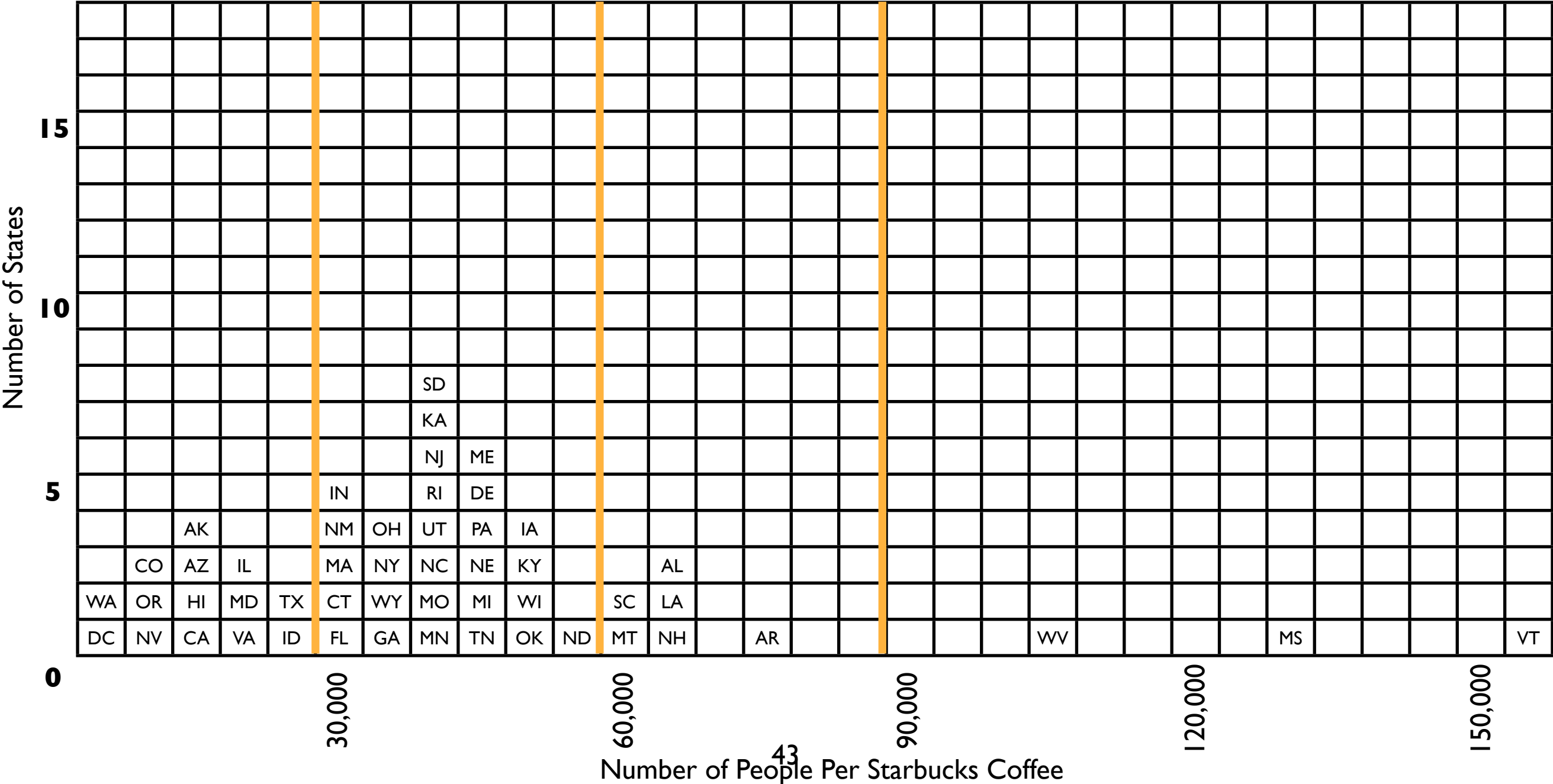


# Choropleth Mapping Activity

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
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EQUAL INTERVALS
Less Than 30,000
30,000 - 59,999
60,000 - 89,999
90,000 - 119,000
120,000 - 149,999
150,000 +

Histogram for Number of People Per Starbucks, 2008



**Name:** \_\_\_\_\_

- | <b>EQUAL INTERVALS</b> |
|------------------------|
| Less Than 30,000       |
| 30,000 - 59,999        |
| 60,000 - 89,999        |
| 90,000 - 119,000       |
| 120,000 - 149,999      |
| 150,000 +              |

# Number of States

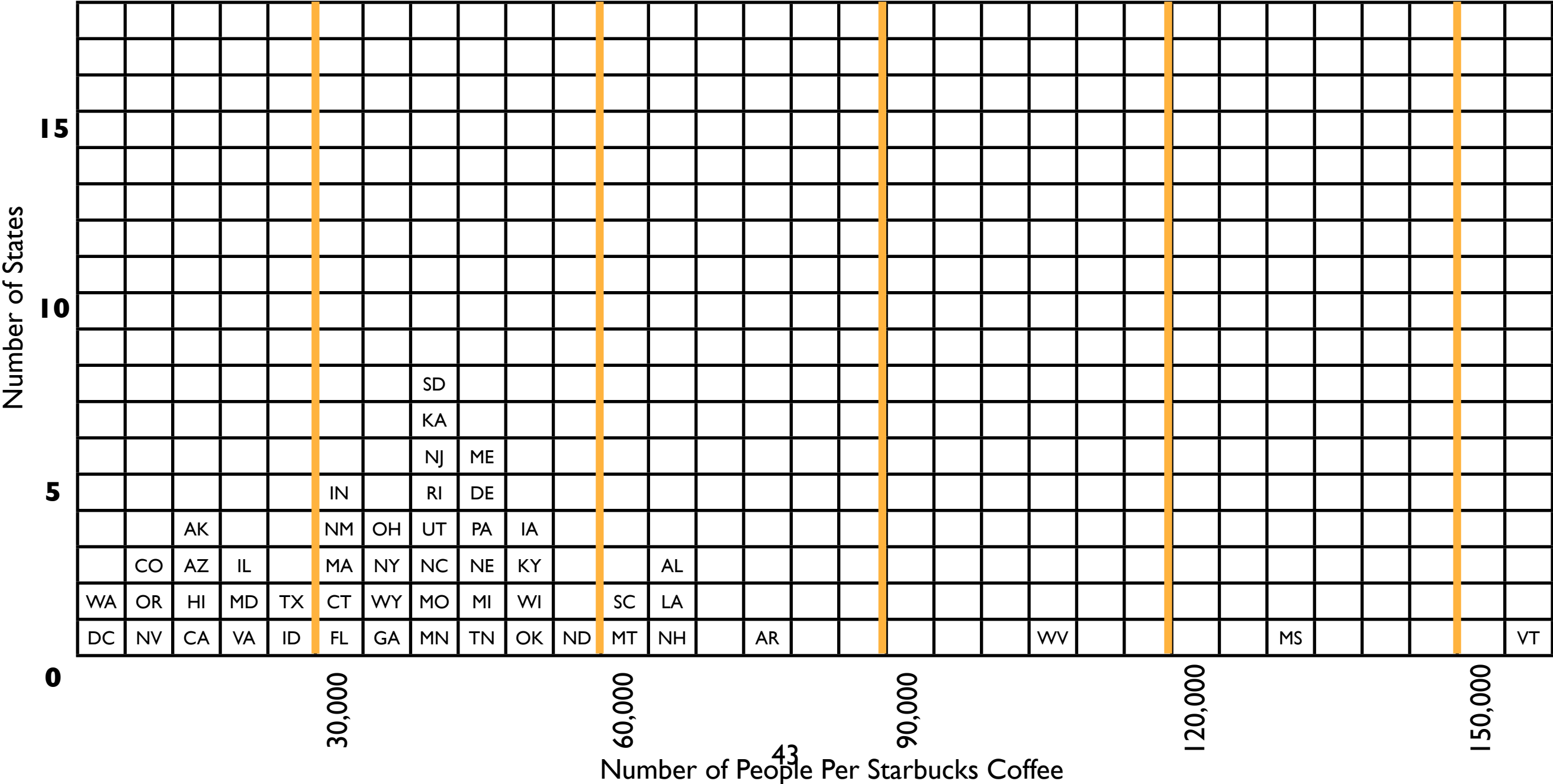


# Choropleth Mapping Activity

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

EQUAL INTERVALS
Less Than 30,000
30,000 - 59,999
60,000 - 89,999
90,000 - 119,000
120,000 - 149,999
150,000 +

Histogram for Number of People Per Starbucks, 2008

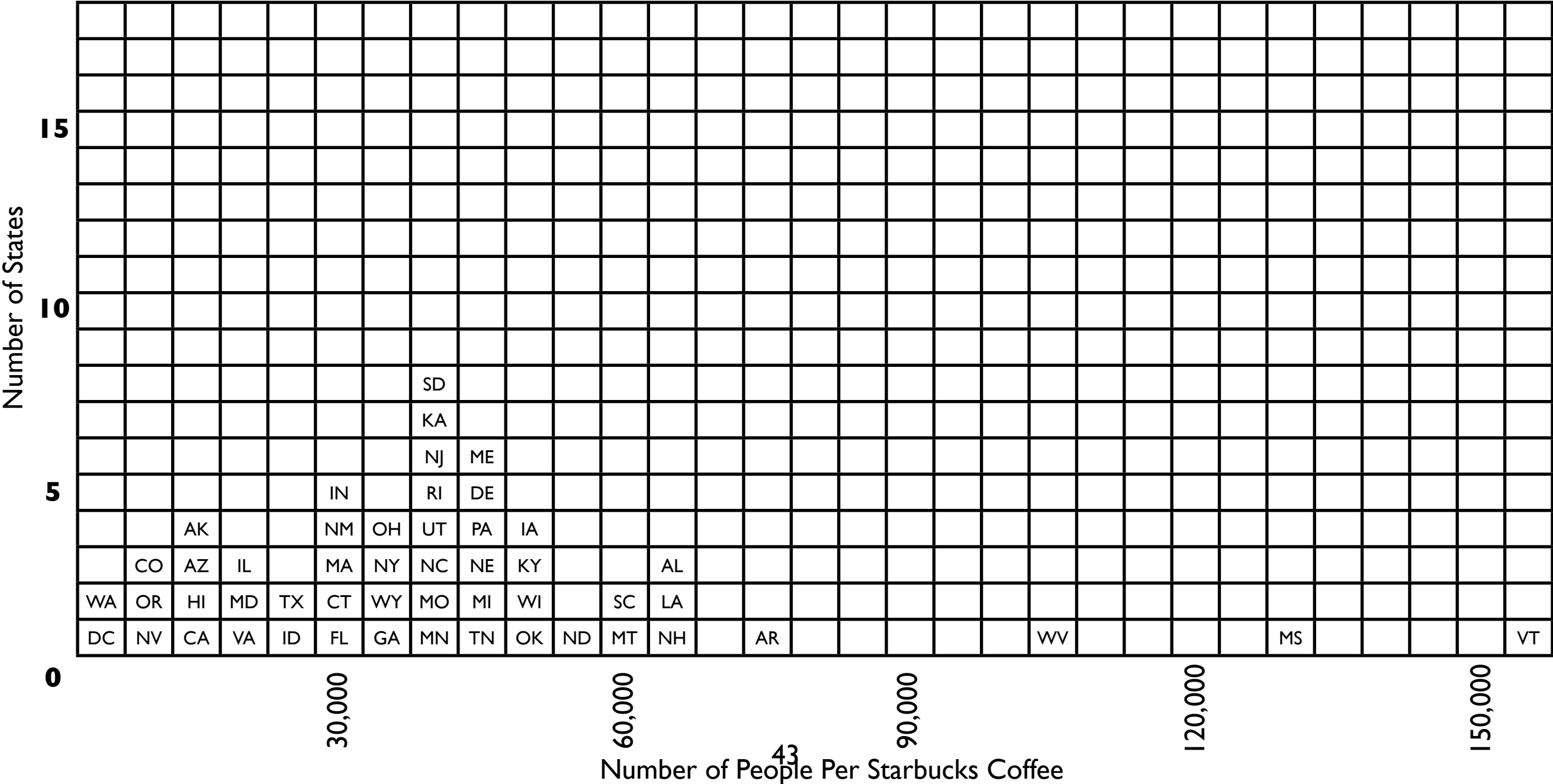


**Choropleth Mapping Activity**

1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  2. Complete a histogram for the statistics.
  3. Using the completed histogram determine between 4 and 6 categories for the data.
  4. Using the map from the Keynote document construct a map for the statistics.
  5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

EQUAL NUMBER
7,686 - 21,402
24,493 - 35,479
35,511 - 44,478
44,677 - 52,707
53,617 - 155,318

**Histogram for Number of People Per Starbucks, 2008**



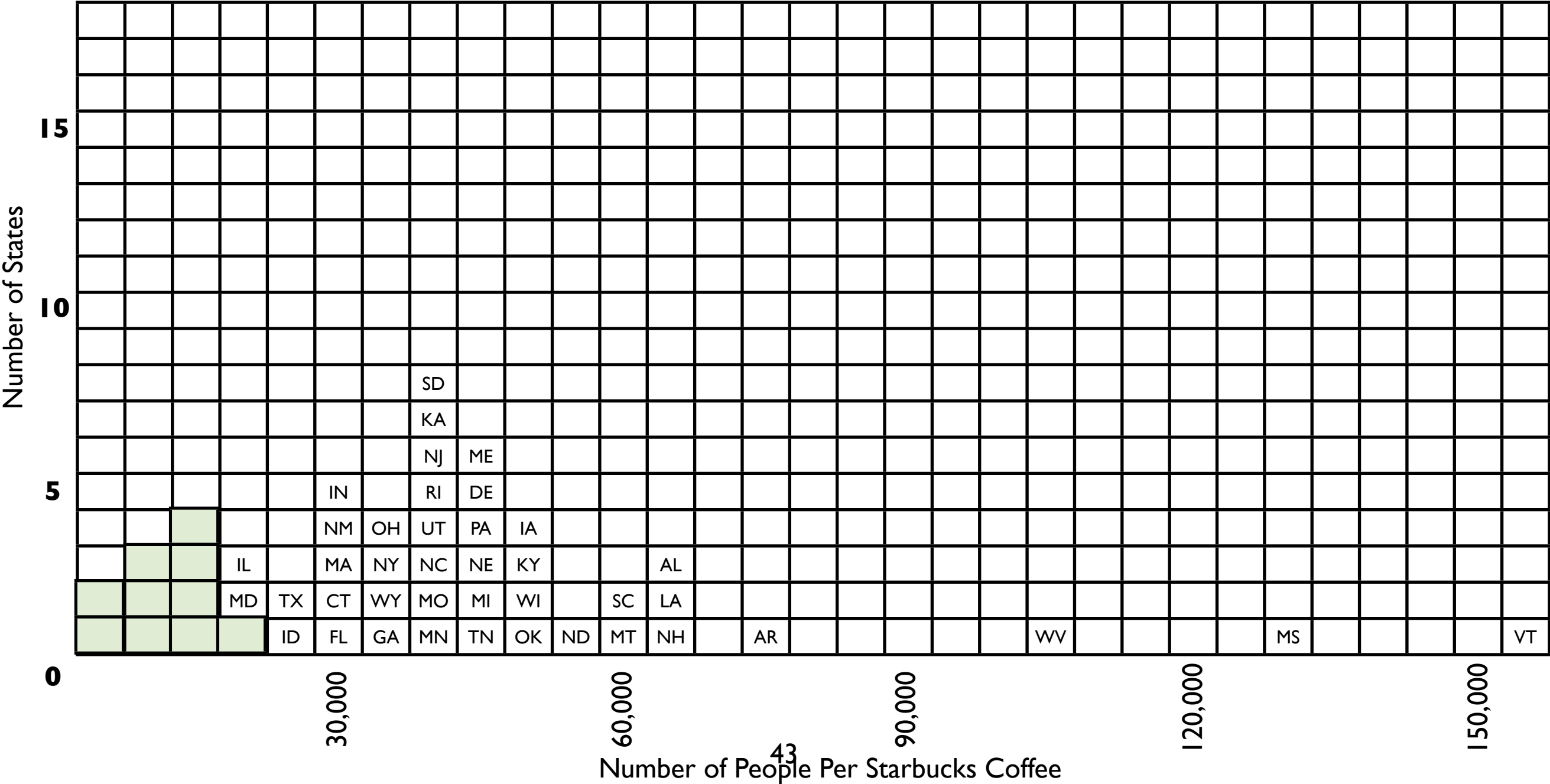
Name: \_\_\_\_\_

# Choropleth Mapping Activity

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

EQUAL NUMBER
7,686 - 21,402
24,493 - 35,479
35,511 - 44,478
44,677 - 52,707
53,617 - 155,318

## Histogram for Number of People Per Starbucks, 2008



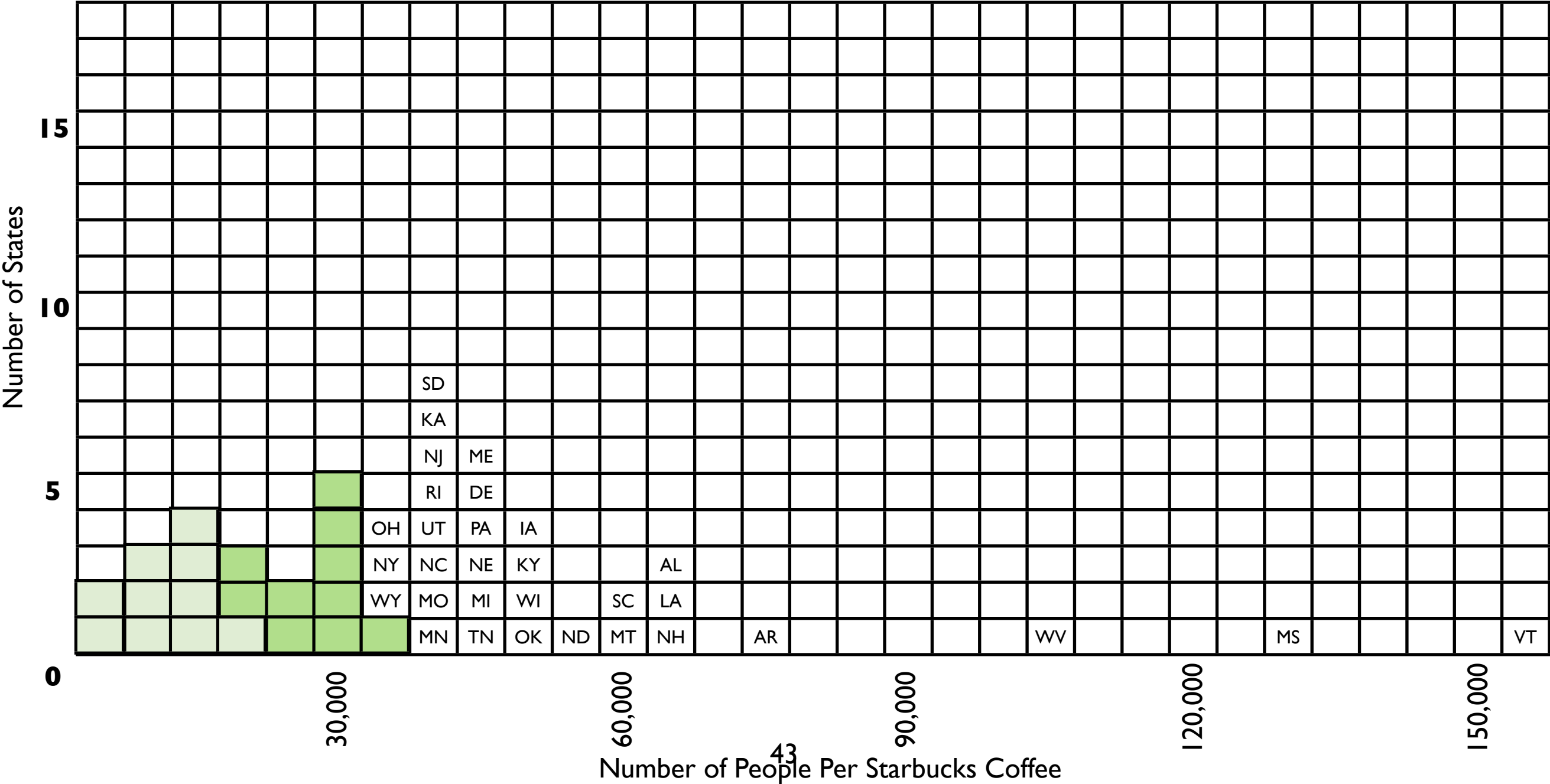
Name: \_\_\_\_\_

# Choropleth Mapping Activity

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

EQUAL NUMBER
7,686 - 21,402
24,493 - 35,479
35,511 - 44,478
44,677 - 52,707
53,617 - 155,318

## Histogram for Number of People Per Starbucks, 2008



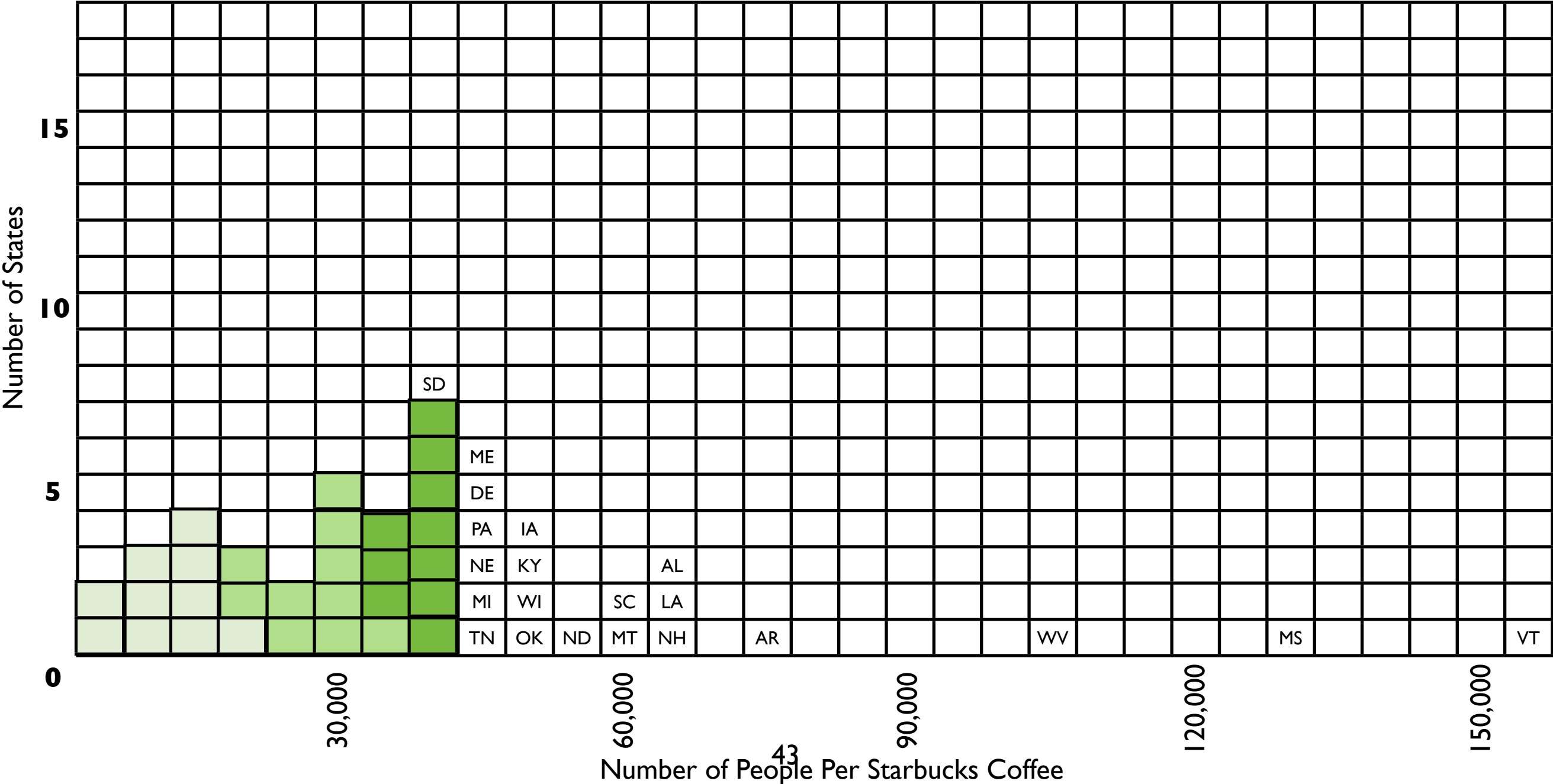


# Choropleth Mapping Activity

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

EQUAL NUMBER
7,686 - 21,402
24,493 - 35,479
35,511 - 44,478
44,677 - 52,707
53,617 - 155,318

Histogram for Number of People Per Starbucks, 2008



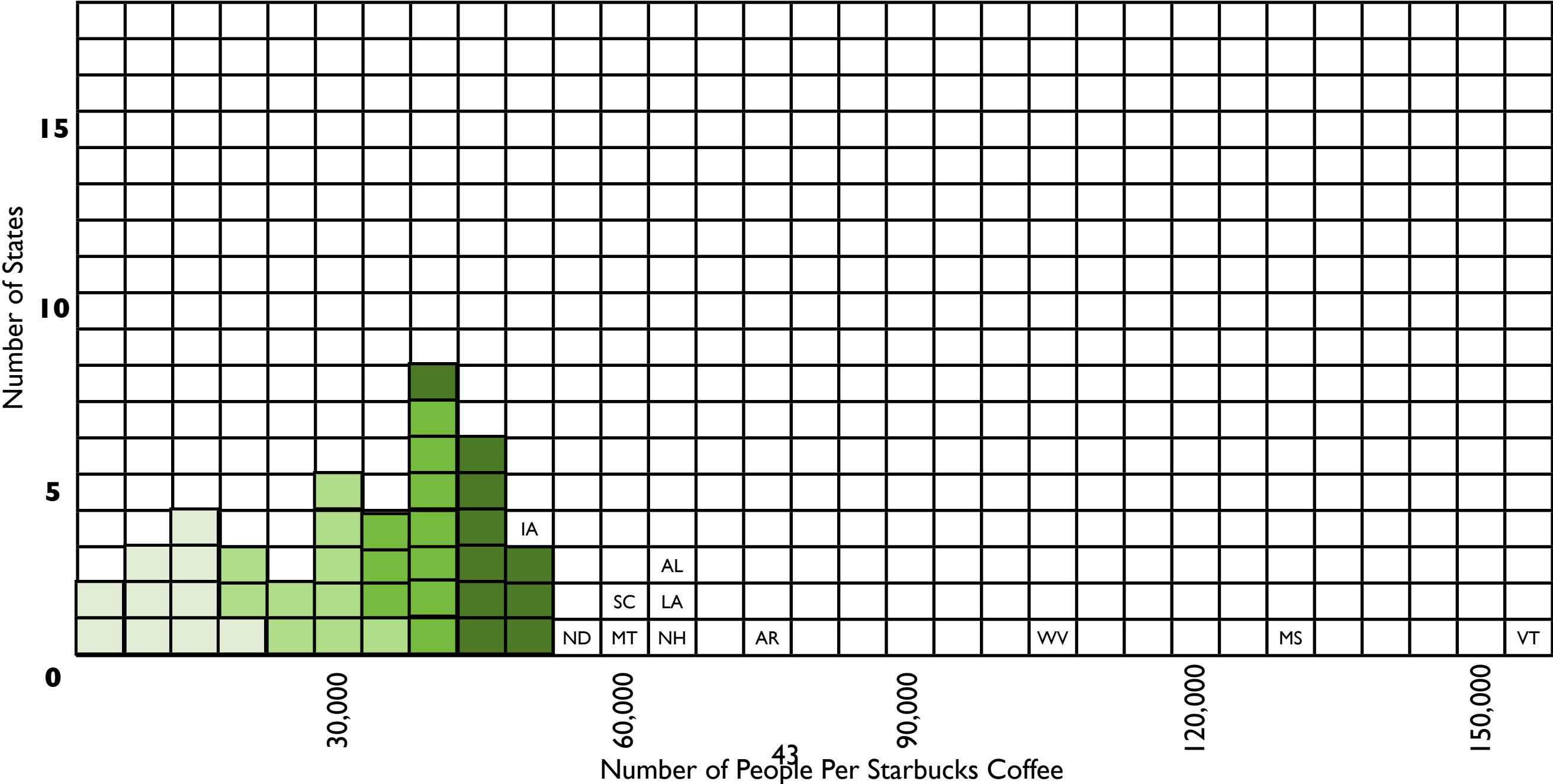
Name: \_\_\_\_\_

# Choropleth Mapping Activity

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

EQUAL NUMBER
7,686 - 21,402
24,493 - 35,479
35,511 - 44,478
44,677 - 52,707
53,617 - 155,318

Histogram for Number of People Per Starbucks, 2008



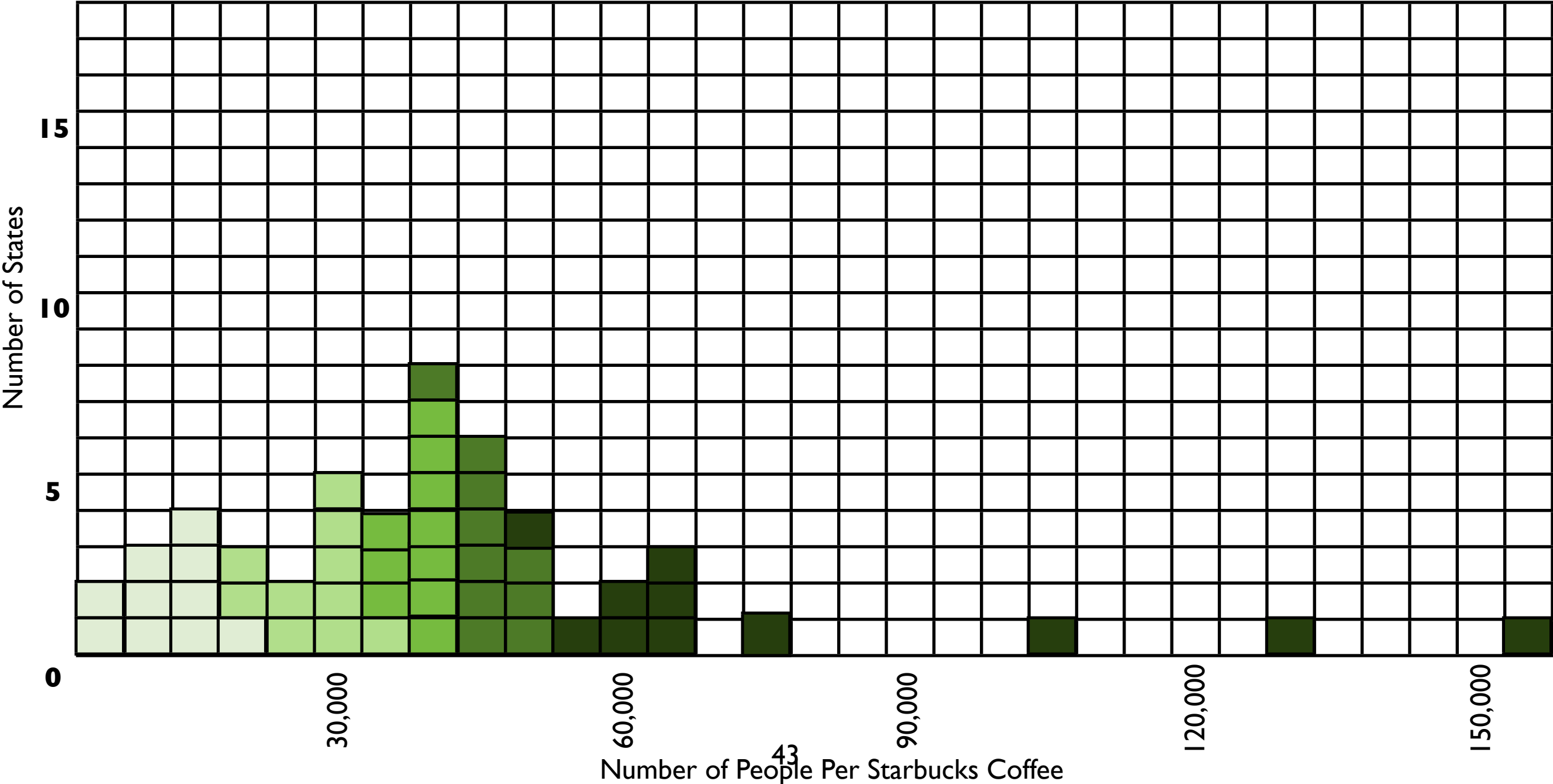
Choropleth Mapping Activity

Name: \_\_\_\_\_

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

EQUAL NUMBER
7,686 - 21,402
24,493 - 35,479
35,511 - 44,478
44,677 - 52,707
53,617 - 155,318

Histogram for Number of People Per Starbucks, 2008



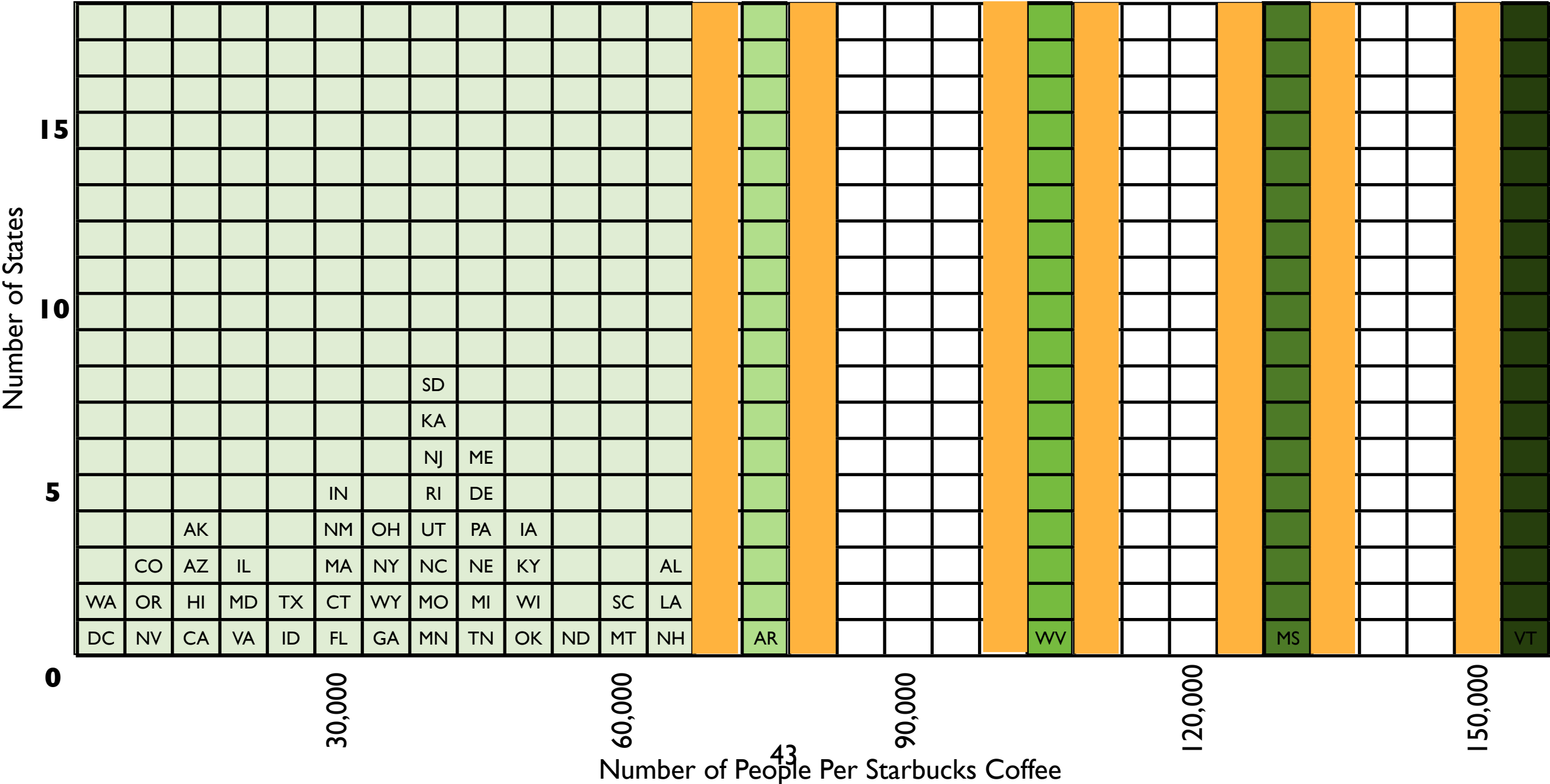
# Choropleth Mapping Activity

Name: \_\_\_\_\_

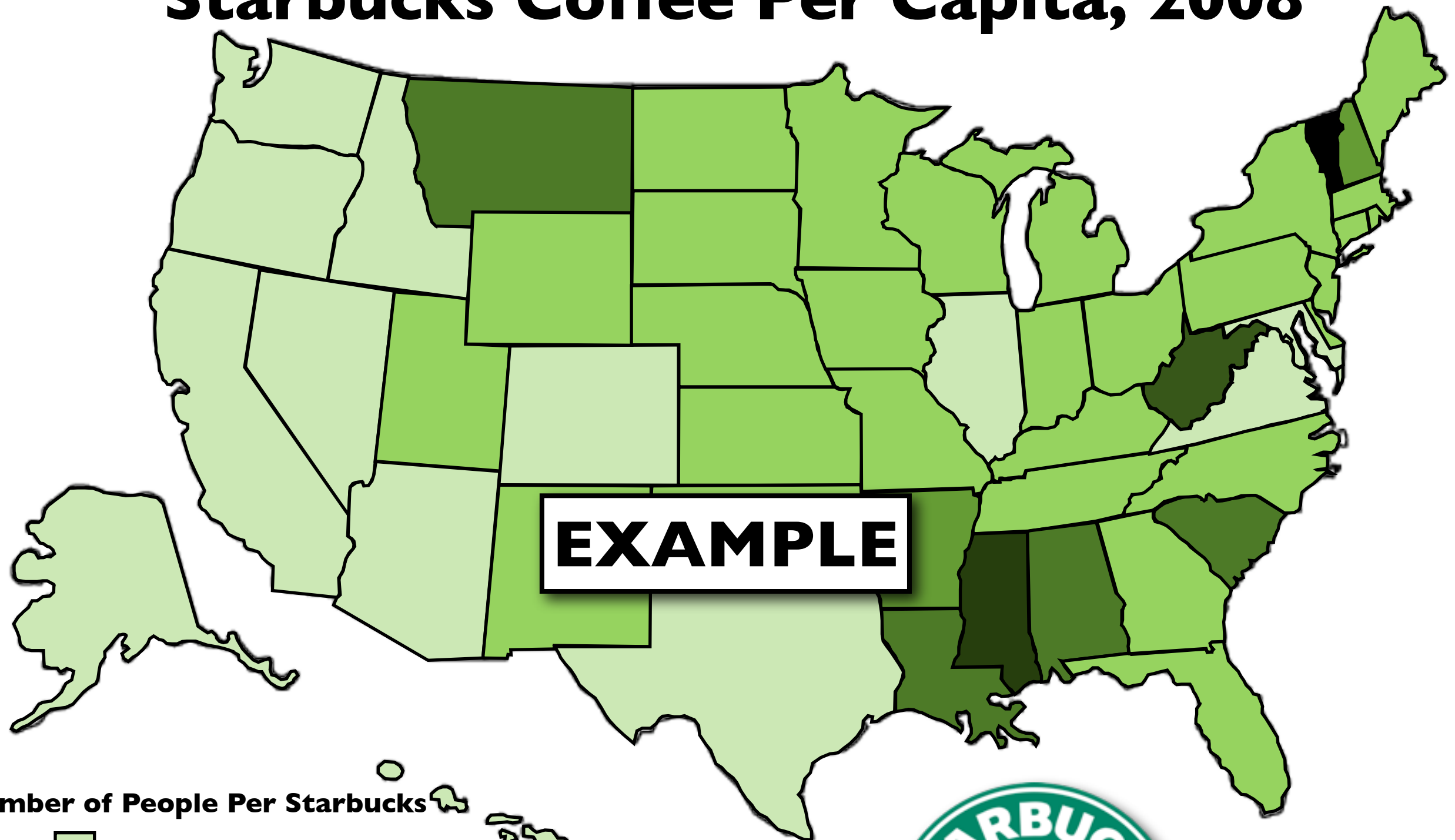
- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

NATURAL BREAKS
7,686 - 69,581
77,173
106,733
133,574
155,318

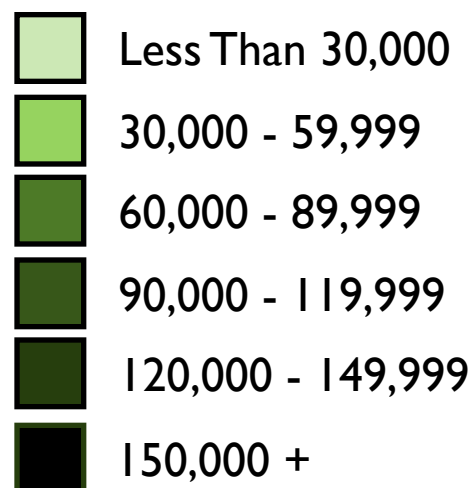
Histogram for Number of People Per Starbucks, 2008



# Starbucks Coffee Per Capita, 2008



Number of People Per Starbucks

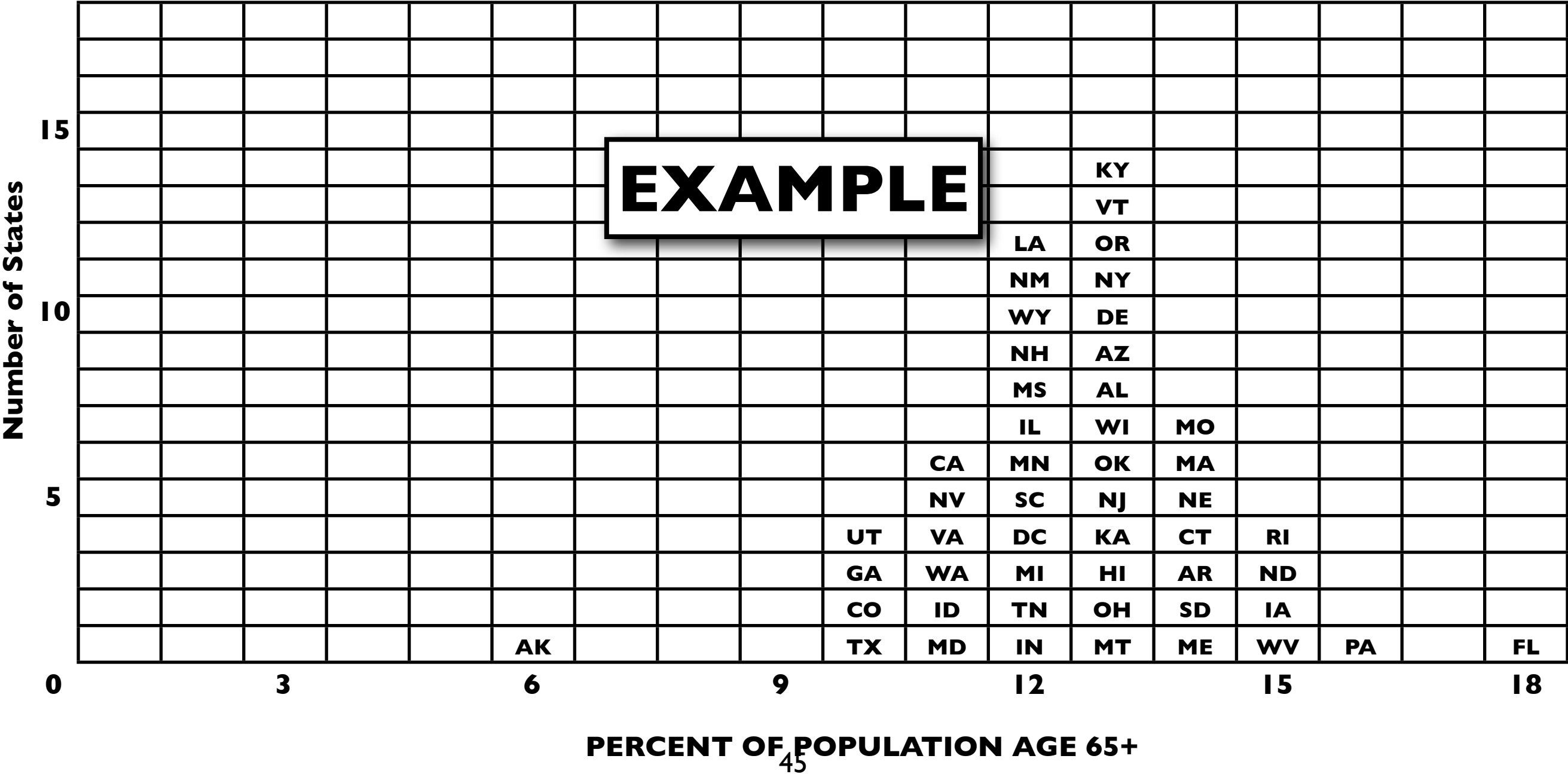


**Choropleth Mapping Activity**

- 1. Select statistics for the United States on any topic that was covered during the first nine weeks.
  - 2. Complete a histogram for the statistics.
  - 3. Using the completed histogram determine between 4 and 6 categories for the data.
  - 4. Using the map from the Keynote document construct a map for the statistics.
  - 5. Make sure the map has the following items: Title, Date, Source, Legend, and Border.
- The color scheme for the map should go from dark to light of similar colors.

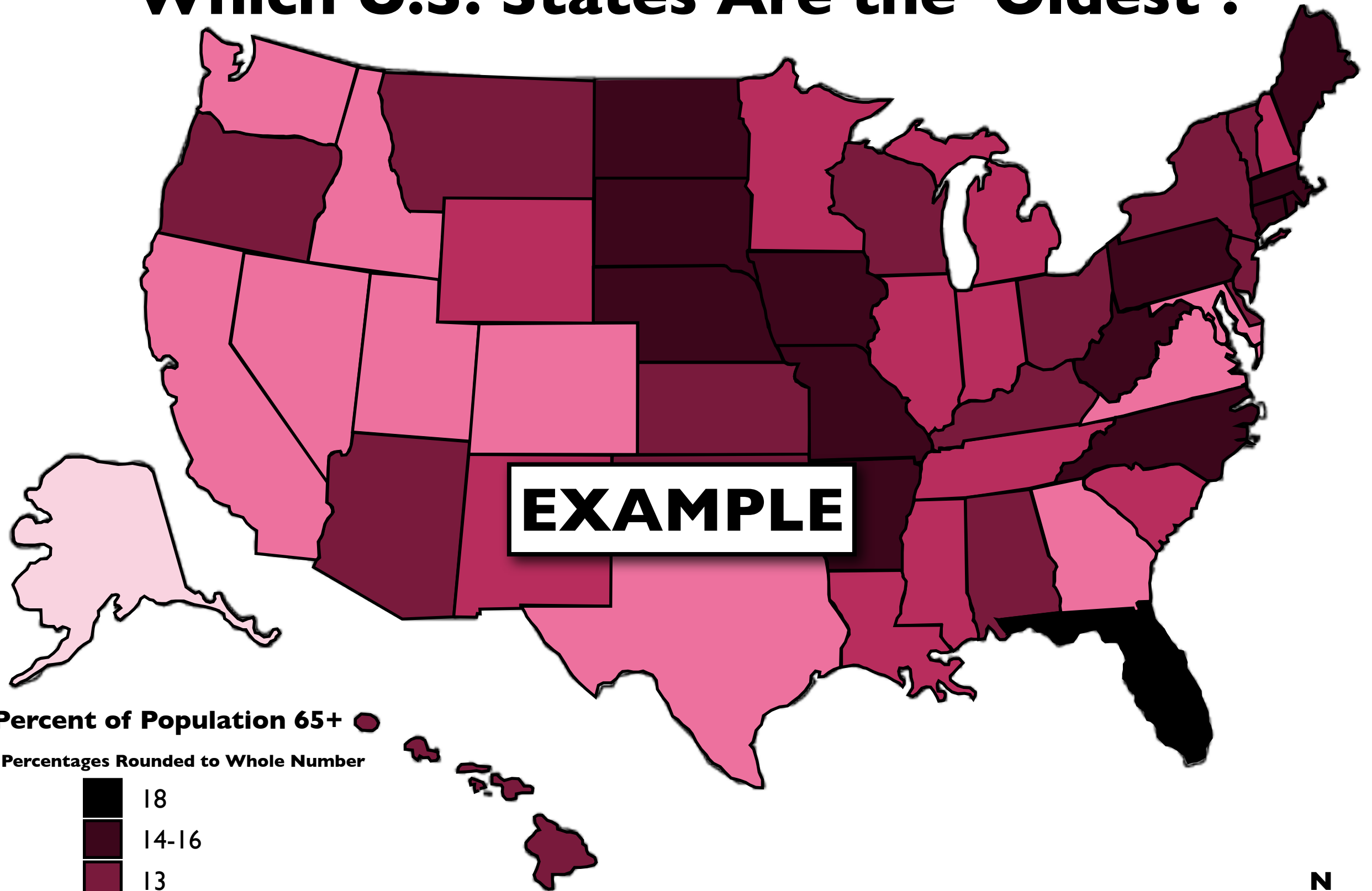
Percent of Pop age 65+
18
14-16
13
12
10-11
6

**Histogram for :**



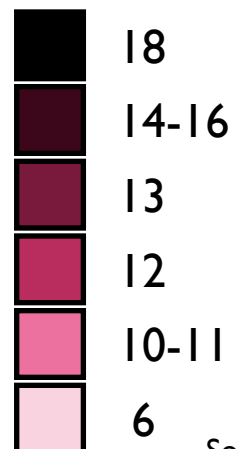


# Which U.S. States Are the 'Oldest'?



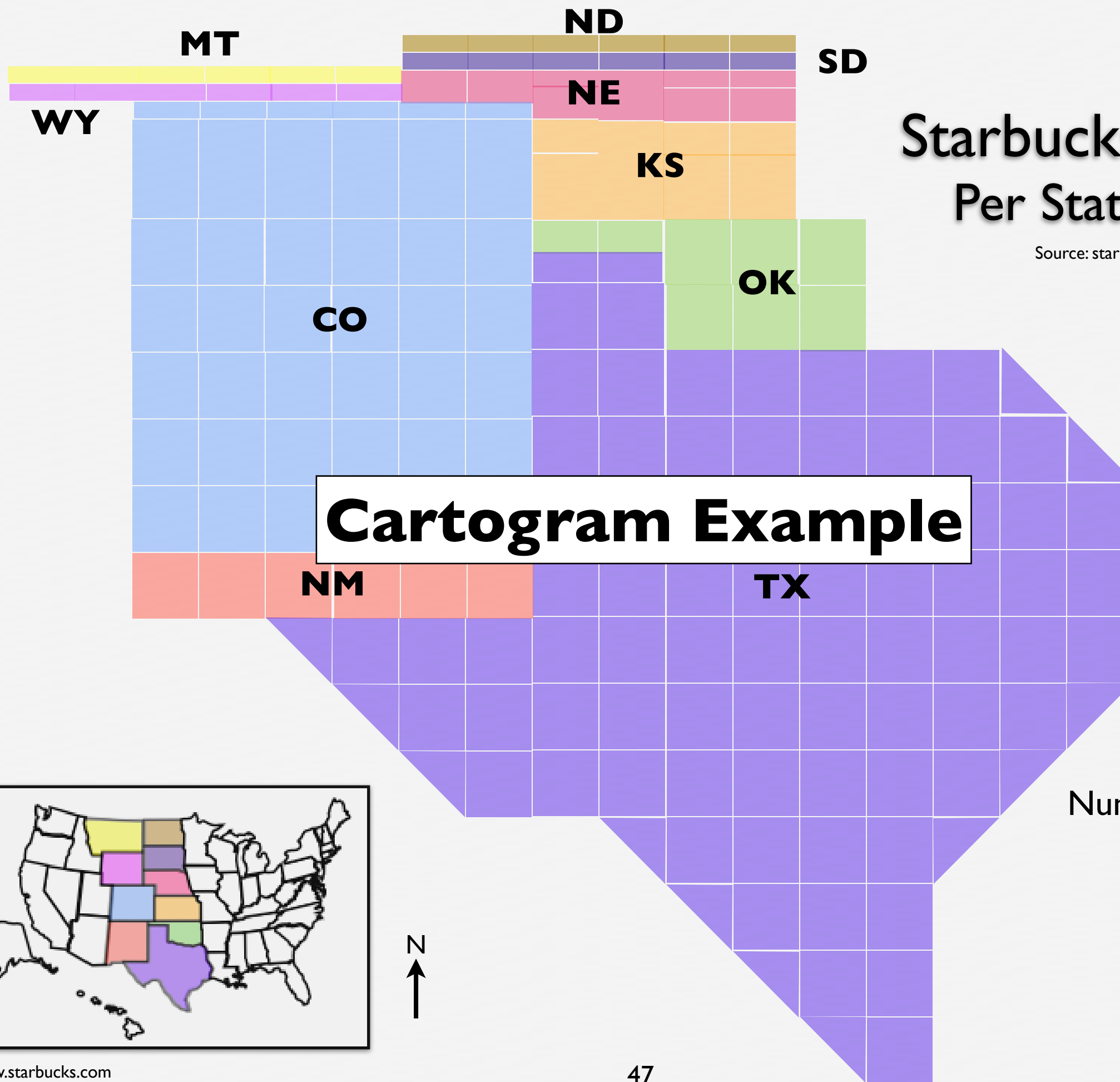
**Percent of Population 65+**

All Percentages Rounded to Whole Number



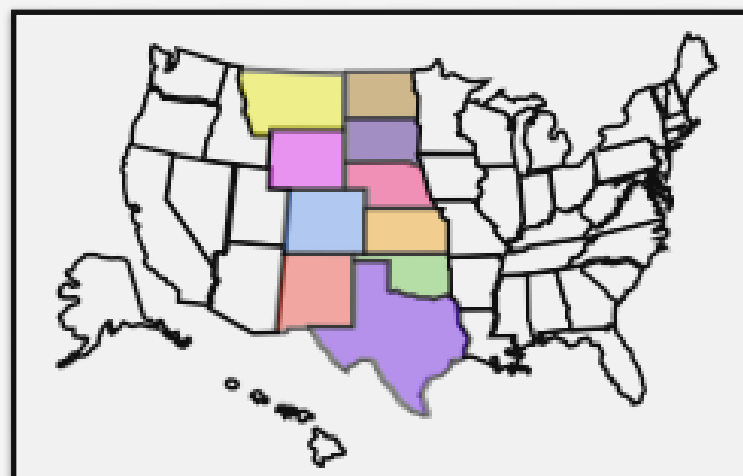
Source: Population Reference Bureau, 2000



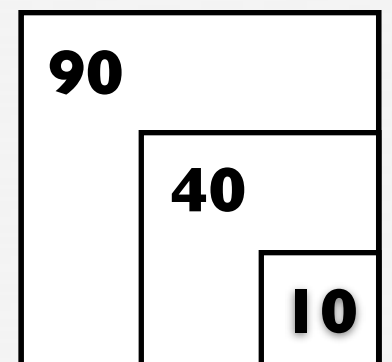


# Starbucks Coffee Per State, 2009

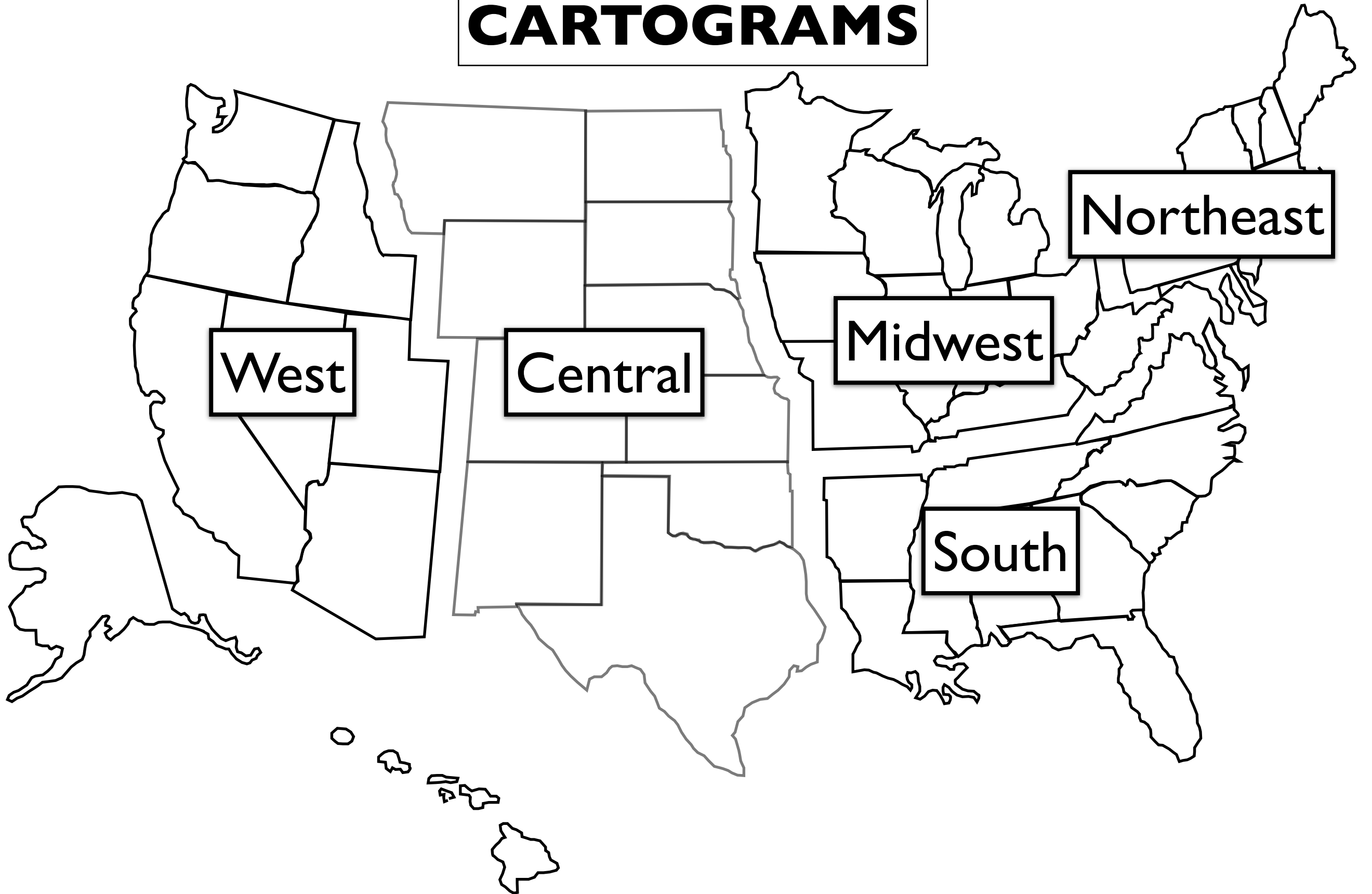
Source: starbucks.com



Number of Starbucks

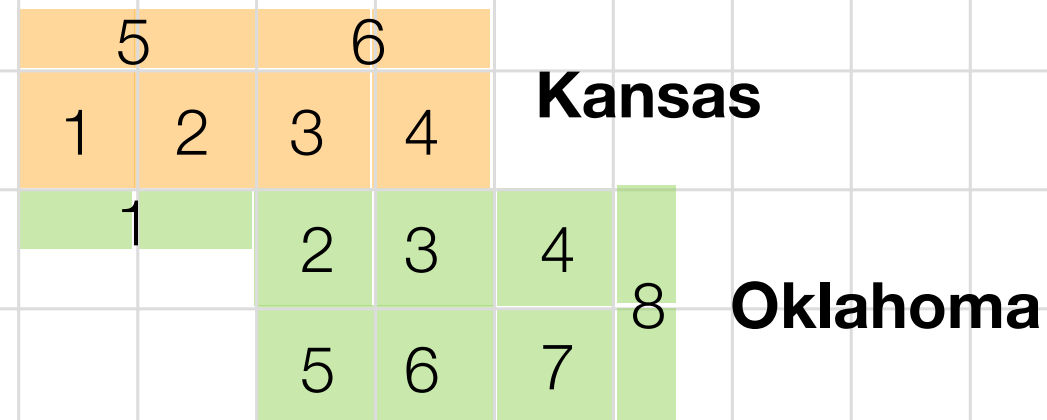


# CARTOGRAMS



# Cartogram Directions

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One block  = 10 Starbucks

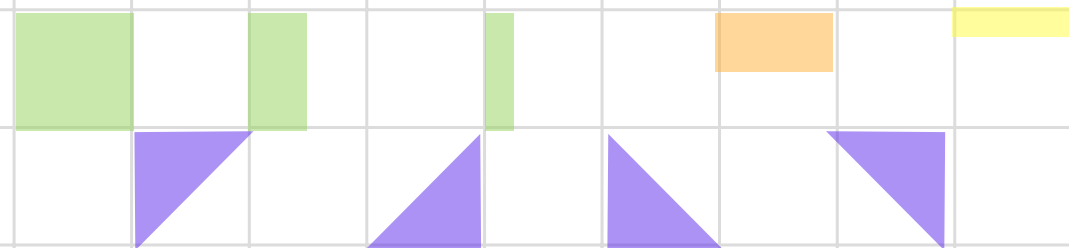
**Kansas has 61 Starbucks**

6.1 Blocks

**Oklahoma has 80 Starbucks**

8.0 Blocks

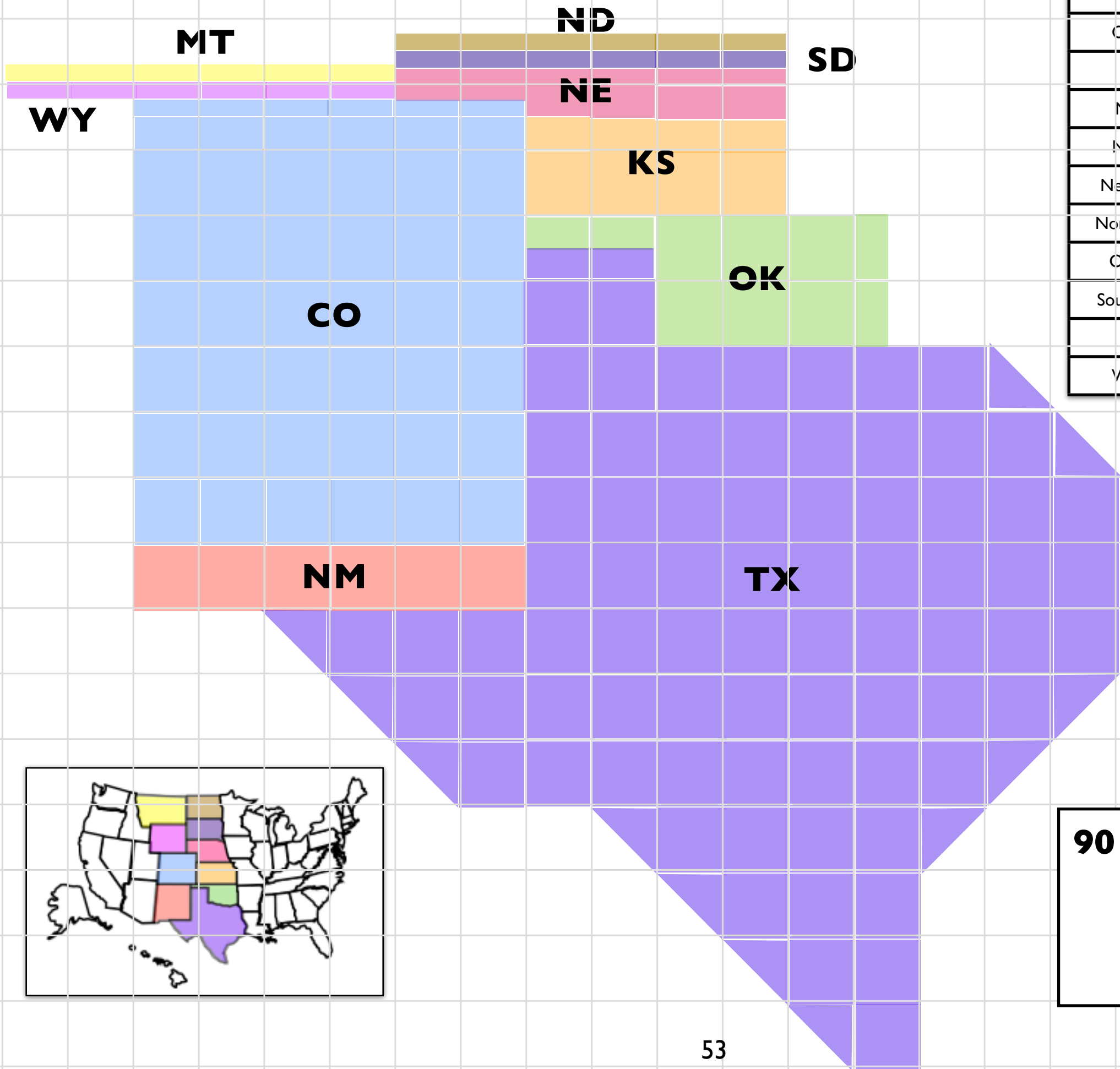
Shapes to Use for Map Construction  
(Delete Before Printing Map)



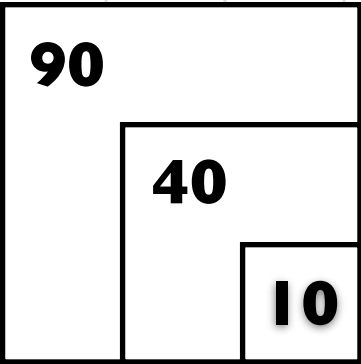
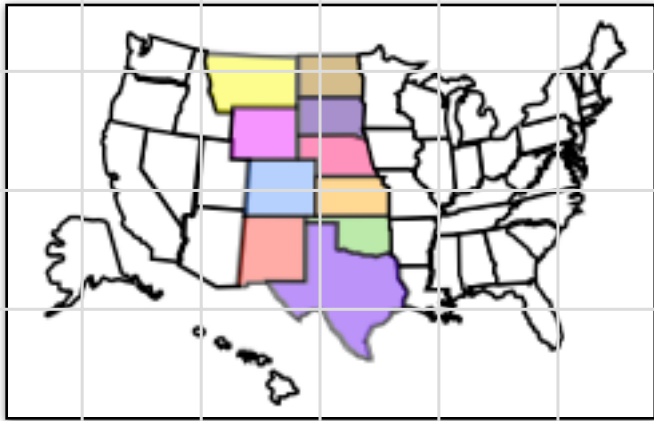


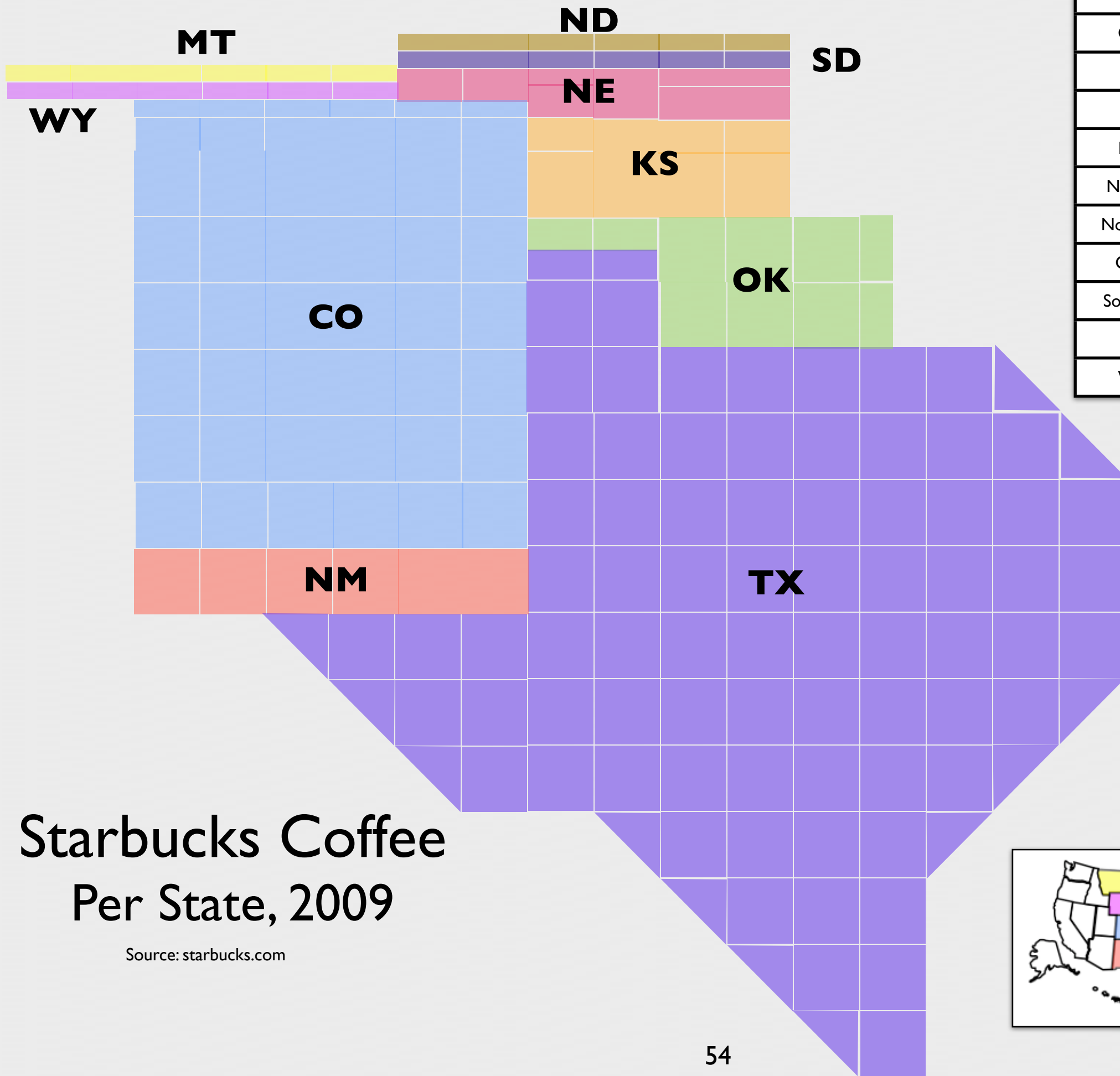






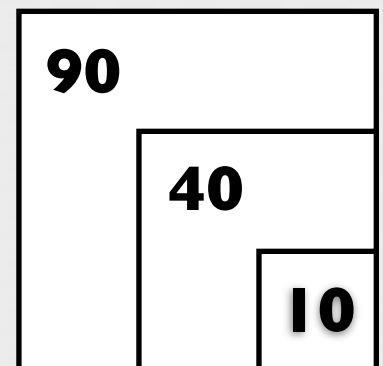
STATE	Number of Starbukcs	
Colorado	410	
Kansas	61	
Montana	16	
Nebraska	42	
New Mexico	57	
North Dakota	15	
Oklahoma	80	
South Dakota	16	
Texas	816	
Wyoming	17	





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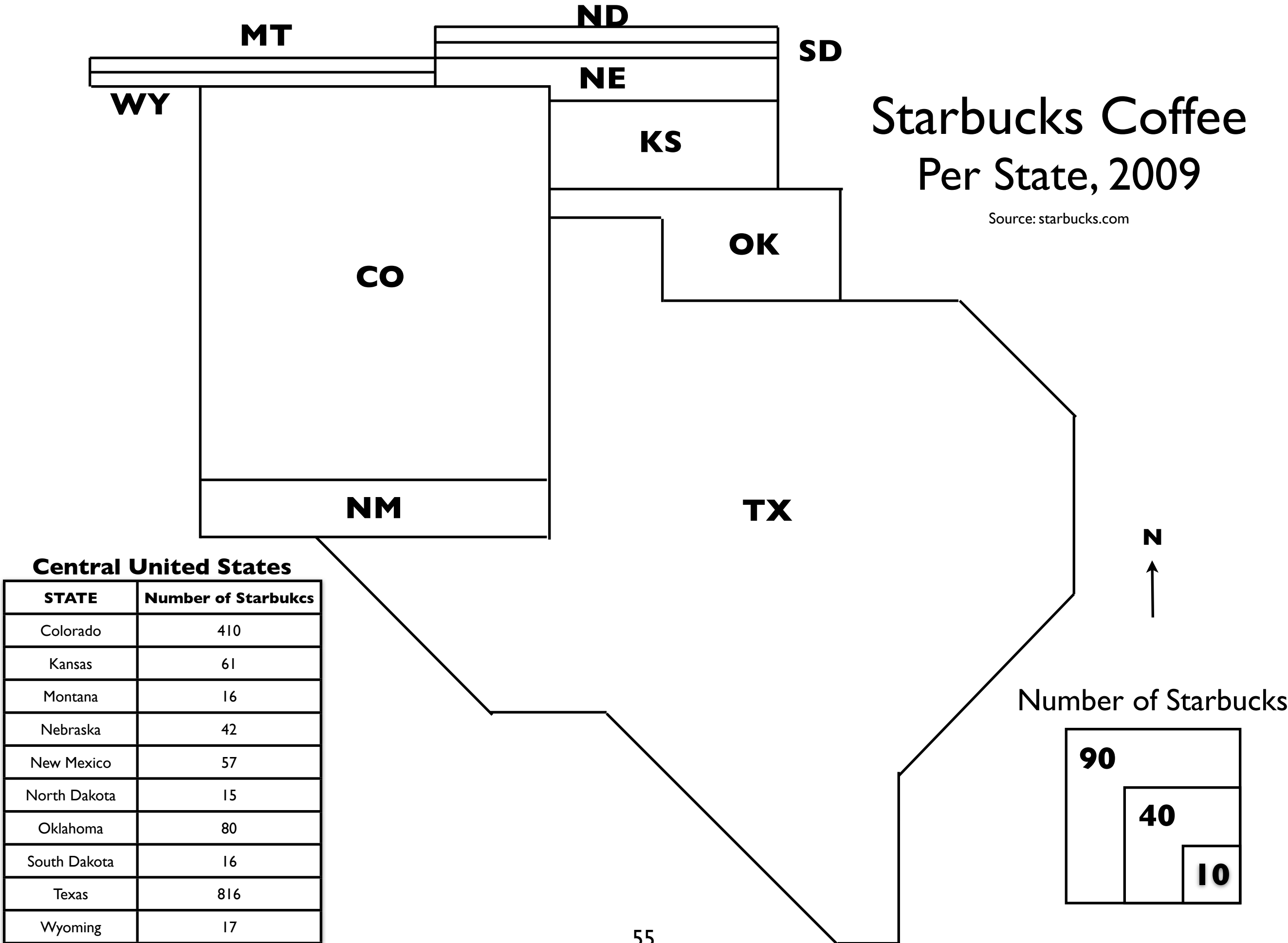
Number of Starbucks



# Starbucks Coffee Per State, 2009

Source: starbucks.com





**Additional Assignment / Extra Credit**

# Starbucks Per County in Tennessee, 2009

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<b>Tennessee Counties</b>	<b>Total Starbucks per County, 2008</b>
Anderson	2
Blount	3
Bradley	2
Coffee	1
Davidison	31
Fayette	1
Hamilton	8
Knox	14
Madison	3
Maury	2
Montgomery	2
Putnam	1
Roane	2
Rutherford	8
Seiver	7
Shelby	40
Sullivan	3
Sumner	3
Tipton	1
Williamson	5
Wilson	1

**Choropleth Mapping Activity**

- 1. Use the statistics for the number of Starbucks per county in Tennessee to complete the histogram below.
- 2. Using the completed histogram determine between 4 to 6 categories for the data.
- 3. Using the map on the next slide (page) construct a map for the statistics.
- 4. Make sure the map has the following items: Title, Date, Source, Legend, and Border.  
The color scheme for the map should go from dark to light of similar colors.

Categories

**Histogram for the number of Starbucks per state in the Tennessee**

