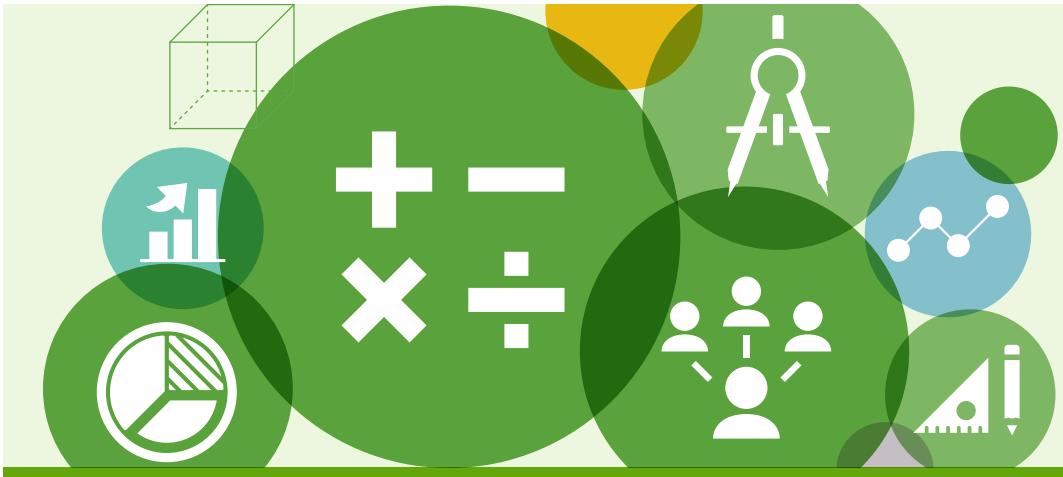


STUDENT VERSION

HOW ARE SINGLE-PARENT HOUSEHOLDS DISTRIBUTED ACROSS THE UNITED STATES?

Activity Items

The following items are part of this activity and appear at the end of this student version.

- Item 1: U.S. Map of Census Bureau Regions
- Item 2: Single-Parent Households by Sex and Census Bureau Region: 2019

Student Learning Objective

- I will be able to create and compare dot and box plots of census data.

NAME:_____ DATE:_____

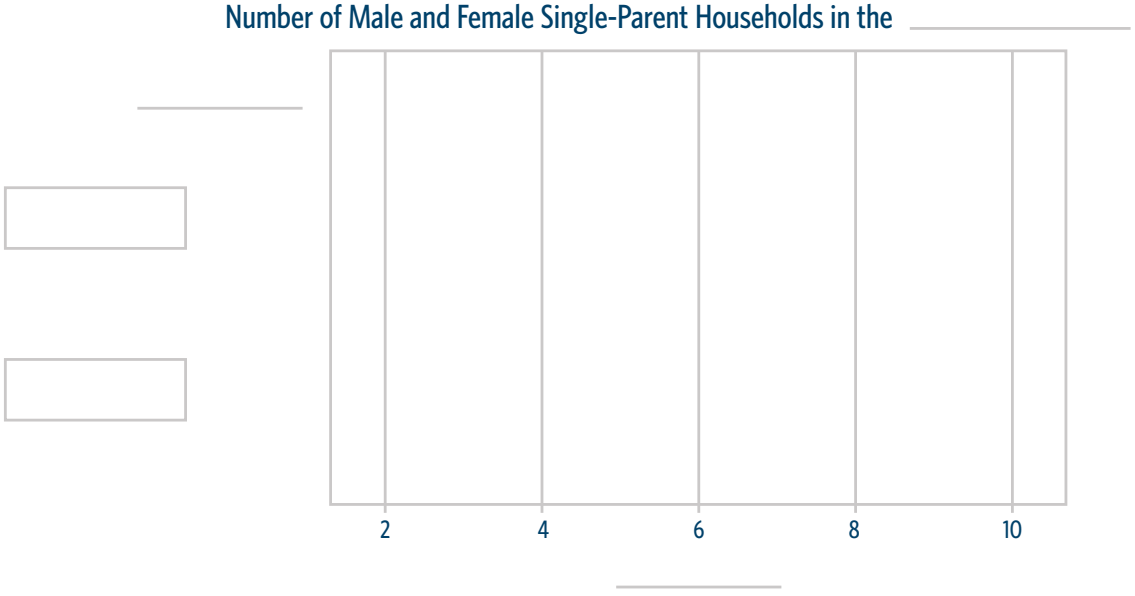
In this activity, you will look at 2019 census data for two types of households in four different geographic regions of the United States: One type is of a man and his children, and the other type is of a woman and her children. In both household types, there is no record of a spouse or partner living in the home at the time of the interview. You will use these data to create dot plots and box plots that will help you see trends in the data.

1. Before you get started, review **Item 1: U.S. Map of Census Bureau Regions** and **Item 2: Single-Parent Households by Sex and Census Bureau Region: 2019**, which show the percentages of single-mother and single-father households in each geographic region.

With your group of four, decide who will complete the work for which region, so that all four are covered, then circle your assigned region below:

- South
- West
- Northeast
- Midwest

2. On the following graph template, make two dot plots for the data in your region — one for male single-parent households and the other for female ones — with one above the other (doesn't matter which is on top and with each dot plotted representing one state within the region). Be sure to fill in the blank for your region at the top as well as the blanks along the vertical axis to label each dot plot.



3. What do you notice about your dot plots?

4. Do you see any clusters of data? If so, describe them.

5. Do you see any outliers? If so, describe them.

6. What differences do you notice between the percentages of male and female single-parent households?

7. In the following table, sort the male and female single-parent householder data for your state/district from **Item 2** (filling in the blank at the top) from the least to greatest percentage of all households:

   Region: _____

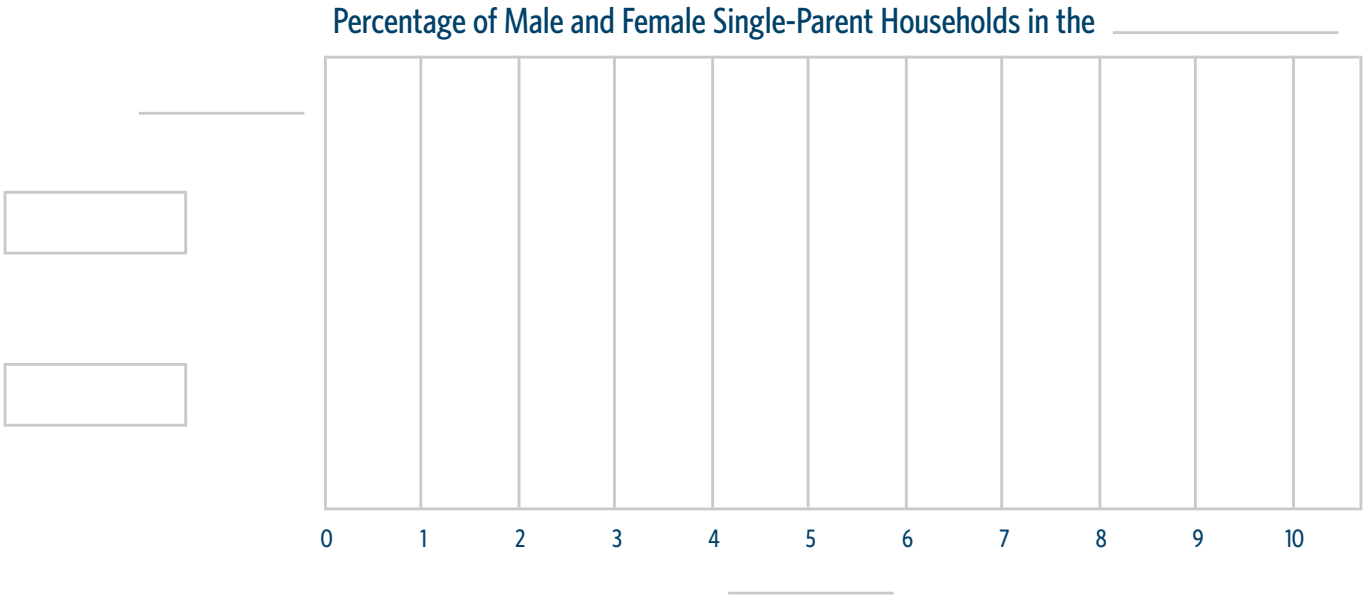
Male Single-Parent Households		Female Single-Parent Households	
State/District	Percentage	State/District	Percentage

8. Use your sorted data to calculate and record the measures in the table below:

   Region: _____

	Male Single-Parent Households	Female Single-Parent Households
Minimum		
First Quartile		
Median		
Third Quartile		
Maximum		
Range		
Interquartile Range (IQR)		

9. Now use these values to create two box plots on the graph template below — one for male and one for female single-parent households — with one above the other (doesn't matter which is on top). Make sure you fill in the blank for your region at the top, label your box plots in the blanks along the left side, and use a ruler to make each box plot neat.



10. What do you notice about your box plots?

11. How do the medians, first quartiles, and third quartiles of your box plots compare?

12. How do the ranges of your box plots compare?

13. How do the interquartile ranges of your box plots compare?

14. Compare your dot and box plots with those of your group members for their assigned regions. Each write three questions you could answer using anyone's plots:

15. Now answer three questions written by your other group members:
    - Question:

      Answer:

    - Question:

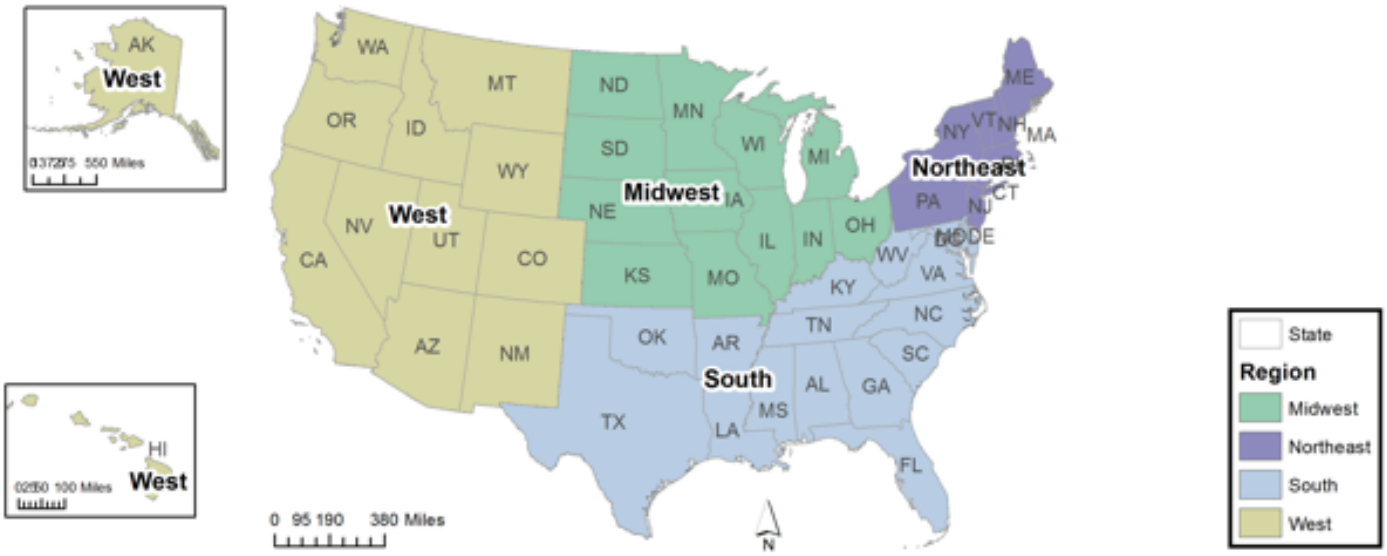
      Answer:

    - Question:

      Answer:

16. Write a paragraph that answers this question: "How do the percentages of male and female single-parent households differ within regions and across regions?" Use the census data and your calculations to support your ideas.

Item 1: U.S. Map of Census Bureau Regions



Item 2: Single-Parent Households by Sex and Census Bureau Region: 2019

South

	Male householder, no spouse/partner present, with own children under 18 years	Female householder, no spouse/partner present, with own children under 18 years
Alabama	1.2%	5.8%
Arkansas	1.2%	5.8%
Delaware	1.4%	4.8%
District of Columbia	1.0%	5.8%
Florida	1.1%	4.8%
Georgia	1.2%	6.7%
Kentucky	1.6%	5.1%
Louisiana	1.3%	7.6%
Maryland	1.1%	5.4%
Mississippi	1.0%	7.8%
North Carolina	1.2%	5.9%
Oklahoma	1.6%	5.5%
South Carolina	0.9%	5.6%
Tennessee	1.4%	5.4%
Texas	1.4%	6.3%
Virginia	1.1%	5.1%
West Virginia	1.2%	4.0%

Item 2: Single-Parent Households by Sex and Census Bureau Region: 2019 (Continued)

West

	Male householder, no spouse/partner present, with own children under 18 years	Female householder, no spouse/partner present, with own children under 18 years
Alaska	1.7%	4.4%
Arizona	1.5%	4.6%
California	1.2%	4.6%
Colorado	1.4%	3.8%
Hawaii	0.9%	3.7%
Idaho	1.3%	3.7%
Montana	1.5%	3.7%
Nevada	1.6%	5.0%
New Mexico	1.6%	6.2%
Oregon	1.3%	3.8%
Utah	1.4%	4.0%
Washington	1.3%	3.9%
Wyoming	1.5%	3.2%

Item 2: Single-Parent Households by Sex and Census Bureau Region: 2019 (Continued)

Northeast

	Male householder, no spouse/partner present, with own children under 18 years	Female householder, no spouse/partner present, with own children under 18 years
Connecticut	1.2%	5.0%
Maine	1.1%	3.7%
Massachusetts	0.9%	4.7%
New Hampshire	1.1%	3.3%
New Jersey	1.0%	4.8%
New York	1.0%	5.2%
Pennsylvania	1.2%	4.9%
Rhode Island	1.6%	5.0%
Vermont	1.6%	3.8%

Item 2: Single-Parent Households by Sex and Census Bureau Region, 2019 (Continued)

Midwest

	Male householder, no spouse/partner present, with own children under 18 years	Female householder, no spouse/partner present, with own children under 18 years
Illinois	1.1%	5.1%
Indiana	1.4%	5.0%
Iowa	1.4%	4.5%
Kansas	1.5%	4.7%
Michigan	1.4%	4.9%
Minnesota	1.4%	3.9%
Missouri	1.5%	4.7%
Nebraska	1.2%	4.4%
North Dakota	1.4%	3.7%
Ohio	1.3%	5.4%
South Dakota	1.0%	4.3%
Wisconsin	1.4%	4.2%

Source: *American Community Survey 1-Year Estimates Data Profiles, 2019*

Click on the link above to view the source data.