

Section 11.R.2 Constructing Graphs from Databases

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Constructing a Bar Graph

Steps to Follow in Constructing a Vertical Bar Graph

1. Draw a vertical axis and _____
2. Mark an appropriate scale on the _____
(The scale must _____.)
3. Mark the categories of _____.
4. Draw the vertical bar for each category so that the _____
_____.
(Note: Make sure the bars _____.)
5. Give the graph _____

▶ Example 1 Constructing a Bar Graph

Construct a bar graph that represents the following population data.

Population of the 8 Largest US
Cities in the US 2020 Census
(to the nearest thousand)

	City	Population
1.	New York, NY	8,253,000
2.	Los Angeles, CA	3,970,000
3.	Chicago, IL	2,678,000
4.	Houston, TX	2,316,000
5.	Phoenix, AZ	1,708,000
6.	Philadelphia, PA	1,578,000
7.	San Antonio, TX	1,567,000
8.	San Diego, CA	1,422,000

Source: www.census.gov

Solution

Exercises

For each set of data, construct a bar graph.

1. Construct a bar graph that represents the following data.

Island	Area in Square Miles (nearest ten thousand)
Greenland	840,000
New Guinea	310,000
Borneo	290,000
Madagascar	230,000
Baffin	200,000
Sumatra	180,000
Honshu	90,000
Great Britain	90,000

2. Construct a bar graph that represents the following data.

Building and City	Height (in stories)
Aon Center (Chicago)	80
Chrysler (NY)	77
Empire State (NY)	102
U.S. Bank Tower(LA)	73
John Hancock Center (Chicago)	100
Willis Tower (Chicago)	110
JPMorgan Chase Tower (Houston)	75
One Liberty Place (Philadelphia)	61

Constructing a Circle Graph

Steps to Follow in Constructing a Circle Graph

1. Find the central angle (angle at the center of the circle) for each category by _____

2. _____
3. _____
4. Label each sector with the _____
5. Give the graph _____

▣ Example 2 Constructing a Circle Graph

Construct a circle graph that represents the following data.

Ethnic Breakdown of Students
Who Took the SAT (Scholastic
Assessment Test), Nationwide, 2010

Ethnicity	% SAT Taken
African-American	13%
Asian-American	11%
Hispanic	14%
Native American	1%
White	54%
Other	3%
No Response	4%

Source: CollegeBoard.com

Solution

Exercises

For each set of data, construct a circle graph.

3. Construct a circle graph that represents the following data.

Percent of Population with
Particular Blood Types

Type of Blood	Percent of Population
O positive (O ⁺)	38%
O negative (O ⁻)	7%
A positive (A ⁺)	34%
A negative (A ⁻)	6%
B positive (B ⁺)	9%
B negative (B ⁻)	2%
AB positive (AB ⁺)	3%
AB negative (AB ⁻)	1%

Source: AABB.org

4. Construct a circle graph that represents the following data.

Cholesterol Levels of 100 Students

Cholesterol Level	Number of Students
Recommended	35
Borderline	15
Moderate Risk	40
High Risk	10