

Name _____ Date _____

Bar Graphs and Line Graphs (pages 54–57)

A graph represents data visually. A **bar graph** compares frequencies.
 A **line graph** compares changes over time.

Drawing a Vertical Bar Graph	Draw and label the horizontal and vertical axes. Title your graph. <ul style="list-style-type: none"> • Choose a scale and interval for the data and mark equal spaces on the vertical axis. • Mark equal spaces on the horizontal axis and label the categories. • Draw a bar for each category. The height shows the frequency.
Drawing a Line Graph	Draw and label the horizontal and vertical axes. Title your graph. <ul style="list-style-type: none"> • Choose a scale and interval for the data and mark equal spaces on the vertical axis. • Mark equal spaces on the horizontal axis and label the categories. • Draw a dot to show the frequency for each category. Draw line segments to connect the dots.

EXAMPLES

A A class collects this data.

Favorite Flavor	Frequency
vanilla	13
strawberry	4
chocolate	10
lemon	2

Determine a scale for this data.
The data go from 2 to 13. You might choose a scale from 0 to 15.

B For the data in Example A, what would be a good interval?

You could use an interval of 2 or 4.

What are the labels for the categories on the horizontal axis?

Vanilla, Strawberry, Chocolate, Lemon

What is the label for the vertical axis? for the horizontal axis? for the graph?

People; Flavors; Favorite Flavors

Try This Together

1. Draw a bar graph for the data in Example A.

HINT: You will have four bars. The tallest bar shows the most popular flavor.

PRACTICE

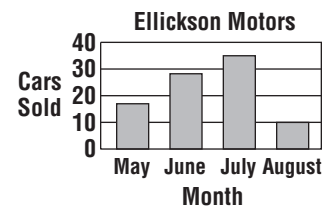
2. What would be the best scale for the following set of data?

Year	1997	1998	1999	2000
Number of Students in Drama Club	3	9	17	15

3. Make a line graph for the set of data in Practice Exercise 2.



4. **Standardized Test Practice** The bar graph shows how many cars were sold recently at Ellickson Motors. Estimate how many cars were sold in July.



A 15

B 35

C 25

D 10

Answers: 1. See Answer Key. 2. 0–20 3. See Answer Key. 4. B