CHAPTER 13  Bar Graphs and Line Plots

Worksheet 1  Making Bar Graphs with Scales

Study the picture graph. Then complete.

Example

- □ represents 4 batteries
- 16 batteries

1. □ represents 3 bottles

Complete.

Example

- 6
- 4
- 2
- □ represents 2 apples

2. □ represents 5 bees
Complete the graph.

Example

<table>
<thead>
<tr>
<th>Kind of Coin</th>
<th>Penny</th>
<th>Nickel</th>
<th>Dime</th>
<th>Quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Coins</td>
<td>12</td>
<td>8</td>
<td>10</td>
<td>16</td>
</tr>
</tbody>
</table>

Vertical bar graph
<table>
<thead>
<tr>
<th>Kind of Food for Lunch</th>
<th>Number of People</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pizza</td>
<td>12</td>
</tr>
<tr>
<td>Pasta</td>
<td>8</td>
</tr>
<tr>
<td>Salad</td>
<td>16</td>
</tr>
<tr>
<td>Sandwich</td>
<td>20</td>
</tr>
</tbody>
</table>
Complete the table.

Example

Count the number of times the vowels appear.

\[
\begin{align*}
&\quad a \quad a \quad a \quad a \quad a \quad a \quad a \\
&\quad e \quad e \quad e \quad e \quad e \quad e \quad e \quad e \quad e \\
&\quad i \quad i \quad i \quad i \quad i \quad i \quad i \quad i \\
&\quad o \quad o \quad o \quad o \quad o \quad o \quad o \quad o \quad o \quad o \quad o \quad o \quad o \\
&\quad u \quad u \quad u \quad u \quad u \quad u \quad u \quad u \quad u \quad u \quad u \quad u \quad u \quad u \\
\end{align*}
\]

<table>
<thead>
<tr>
<th>Vowel</th>
<th>a</th>
<th>e</th>
<th>i</th>
<th>o</th>
<th>u</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Times Vowel Appears</td>
<td>9</td>
<td>15</td>
<td>12</td>
<td>18</td>
<td>15</td>
</tr>
</tbody>
</table>

Use the table to complete the bar graph.

This bar graph uses a **scale** of 3. It starts with 0 and skips in threes. The greatest number on the scale is 21 because the graph needs to include all the data.
Count the number of insects. Then complete the table.

<table>
<thead>
<tr>
<th>Kind of Insect</th>
<th>Butterfly</th>
<th>Bee</th>
<th>Dragonfly</th>
<th>Grasshopper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Insects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Use the table in Exercise 4 to complete the bar graph.
Use the data given to complete the bar graph.

   Bonita sells 60 more sacks of rice than Ali.
   Charlie sells 30 more sacks of rice than Bonita.
Worksheet 2  Reading and Interpreting Bar Graphs

A bar graph shows the number of people who went to the circus in a week.

Day of the Week

Monday  Tuesday  Wednesday  Thursday  Friday

Number of People

0  10  20  30  40  50  60  70  80  90  100  110  120  130  140  150  160  170  180
Use the bar graph on the previous page to answer questions 1 through 8.

1. How many people went to the circus on Monday?

2. How many people went to the circus on Friday?

3. On which day did 100 people go to the circus?

4. On which day did 160 people go to the circus?

5. On which day did the least number of people go to the circus?

6. On which day did the greatest number of people go to the circus?

7. How many more people went to the circus on Friday than on Wednesday?

8. How many fewer people went to the circus on Monday than on Thursday?
The graph shows the number of coins collected by Cheryl.

Use the bar graph to answer questions 9 through 15.

9. Cheryl collected _________ dimes.

10. She collected _________ 50¢ coins.

11. She collected 50 _________.

12. The coin she collected the least of is the _________.

13. The coin she collected the most of is the _________.

14. She collected _________ fewer nickels than quarters.

15. She has twice as many _________ as _________.
Ken's uncle has a fruit orchard.

There are 45 orange trees.
There are twice as many apple trees as orange trees.
There are 45 more mango trees than apple trees.
There are 30 fewer guava trees than mango trees.

16. Use the data to help Ken complete the bar graph.

17. How many apple trees are there? ________

18. How many guava trees are there? ________

19. The greatest number of trees are ____________ trees.

20. The least number of trees are ____________ trees.

21. How many more orange trees must be planted so that the number of orange trees and the number of guava trees are the same? ________
Worksheet 3  Line Plots

Complete the tally chart.

Use the data in the tally chart to make a line plot.

Example

The tally chart shows the number of points scored by some students in a math quiz.

<table>
<thead>
<tr>
<th>Number of Points</th>
<th>Tally</th>
<th>Number of Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>###</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>###</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>####</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>###</td>
<td>5</td>
</tr>
</tbody>
</table>

Line Plot

Each X stands for 1 student.
The tally chart shows the number of books read by some students in February.

Complete the tally chart.

1. | Number of Books Read | Tally | Number of Students |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>/////</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>#### 1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>####</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>###</td>
<td></td>
</tr>
</tbody>
</table>

Use the data in the tally chart to complete the line plot.

2. | Number of Books Read |
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3  4  5  6</td>
</tr>
<tr>
<td>X  X  X  X</td>
</tr>
</tbody>
</table>

Number of Books Read
Use the data in the line plot to answer the questions.

1. What does each \( X \) on the line plot stand for? 

2. How many students read 4 books in February?

     ________ students

3. How many students read more than 4 books in February?

     ________ students

4. What is the greatest number of books read by any student in February?

     ________ books

5. How many students were surveyed?

     ________ students
Andy counted the erasers in different boxes.

Use the data in the line plot to answer the questions.

8. What does each X on the line plot stand for? ________

9. How many boxes contain 13 erasers? ________ boxes

10. What is the most common number of erasers per box?
    ________ erasers

11. How many boxes were counted?
    ________ boxes