

# Statistics and Data Analysis

## General Terms

Term	Definition
data	information that has been gathered; when specifically gathered and organized for analysis, it is called a data set
distribution	the way a data set is arranged to show its spread across a range as well as the frequency of its data

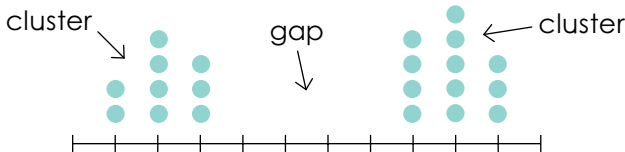
**Preview**  
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## Analyzing and Describing Data Sets

Term	Definition	Example								
absolute deviation	the distance between each data point and the mean; one measure of variability	<div>31, 42, 47 → The mean is 40.</div> <table><tr><th>data point</th><th>absolute deviation</th></tr><tr><td>31</td><td><math> 40 - 31  = 9</math></td></tr><tr><td>42</td><td><math> 40 - 42  = 2</math></td></tr><tr><td>47</td><td><math> 40 - 47  = 7</math></td></tr></table>	data point	absolute deviation	31	$ 40 - 31  = 9$	42	$ 40 - 42  = 2$	47	$ 40 - 47  = 7$
data point	absolute deviation									
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# Statistics and Data Analysis

## Analyzing and Describing Data Sets

Term	Definition	Example
cluster	multiple data points grouped closely together	
gap	space between data points with no other collected data	





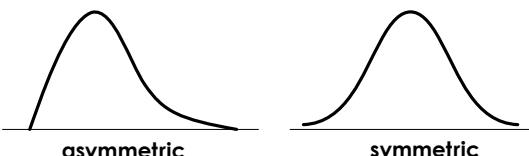
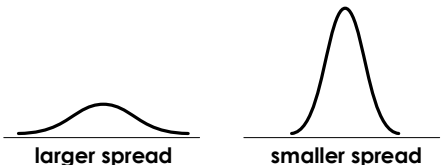
# Preview

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		<div><div></div><div></div><div></div></div> $9 + 2 + 7 = 18 \div 3 = 6$ <p>The mean absolute deviation is 6.</p>
median	in an ordered list of data points, either the middle value (for an odd number of data points) or the mean of the two middle values (for an even number of data points); one measure of center	<p>2, 6, <u>6</u>, 8, 9 → The median is 6.</p> <p>4, <u>4</u>, <u>5</u>, 8 → The median is 4.5.</p>
mode	the value that occurs most frequently in a data set; one measure of center	<p>2, 3, 3, 4, 5, <u>6, 6, 6</u>, 9</p> <p>The mode is 6.</p>



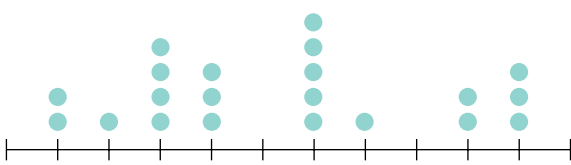
# Statistics and Data Analysis

## Analyzing and Describing Data Sets

Term	Definition	Example
outlier	an extreme value in a data set, much larger or smaller than other values, with few or no nearby data points	
peak	the highest point of a graph or a specific cluster on a graph	
<div><div><h1>Preview</h1><p>Please log in to download the printable version of this worksheet.</p></div></div>		
symmetric vs. asymmetric	how evenly or unevenly data is spread around a mean; in perfectly symmetric distributions, mean, median, and mode are the same	
variability (spread)	a measure of how far apart data points are from the center and from each other	



# Statistics and Data Analysis

## Visual Displays of Data Sets

Term	Definition	Example												
bar graph	uses disparate bars to show the number of data points within entirely separate categories of a data set													
														
dot plot / line plot	shows each data point from a data set as a dot or similar symbol above a number line													
frequency table	a table that shows how often a value or range of values occurs in a data set, often using tally marks in the middle of three columns	<table border="1"> <thead> <tr> <th>needs glasses</th><th>tally</th><th>frequency</th></tr> </thead> <tbody> <tr> <td>never</td><td>    </td><td>4</td></tr> <tr> <td>always</td><td>    </td><td>4</td></tr> <tr> <td>sometimes</td><td>  </td><td>2</td></tr> </tbody> </table>	needs glasses	tally	frequency	never		4	always		4	sometimes		2
needs glasses	tally	frequency												
never		4												
always		4												
sometimes		2												

# Statistics and Data Analysis

## Visual Displays of Data Sets

Term	Definition	Example								
histogram	uses connected bars to show the number of data points within equal, continuous, numerical ranges of a data set									
<div><div><h1>Preview</h1><p>Please log in to download the printable version of this worksheet.</p></div></div>										
		<table><tr><th>stem</th><th>leaf</th></tr><tr><td>0</td><td>6 8</td></tr><tr><td>①</td><td>2 3 3 ⑤</td></tr><tr><td>2</td><td>0 1</td></tr></table>	stem	leaf	0	6 8	①	2 3 3 ⑤	2	0 1
stem	leaf									
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