

Chapter 10 Completed Graphic Organizer

Name _____

Date _____

Stem-and-leaf plot

Uses the digits of data values to organize a data set

The stem is the digit or digits on the left.

The leaf is the digit or digits on the right.

Shows how data are distributed

Example
Tickets sold per day:
32, 21, 5, 9, 7, 28, 32, 39, 48, 47

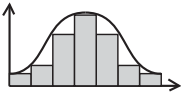
Stem	Leaf
0	5 7 9
1	
2	1 8
3	2 2 9
4	7 8

Key: 2|8 = 28 tickets

Shapes of distributions

You can use dot plots and histograms to identify shapes of distributions.

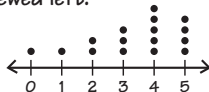
Symmetric:



The left side is a mirror image of the right side.

When a data distribution is symmetric, use the mean to describe the center and use the MAD to describe the variation.

Skewed left:



- The "tail" extends to the left.
- Most data are on the right.

Skewed right:



- The "tail" extends to the right.
- Most data are on the left.

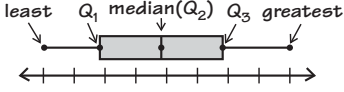
When a data distribution is skewed, use the median to describe the center and use the IQR to describe the variation.

Box-and-whisker plot

Represents a data set along a number line by using the least value, the greatest value, and the quartiles of the data

The five numbers that make up the box-and-whisker plot are called the five-number summary of the data set.

Shows the variability of a data set



About $\frac{1}{4}$ of the data are in each whisker.

About $\frac{1}{2}$ of the data are in the box.

A long whisker or box indicates that the data are more spread out.

Symmetric: 

- Whiskers about same length
- Median in the middle of the box

Skewed left: 

- Left whisker longer than right
- Most data on the right

Skewed right: 

- Right whisker longer than left
- Most data on the left

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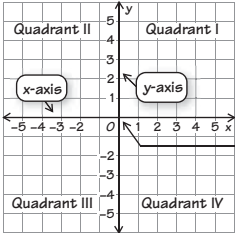
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4.

Absolute value	
Distance between a number and 0 on a number line	The absolute value of a number a is written as $ a $.
The absolute value of a positive number is positive.	$ 5.3 = 5.3$
The absolute value of a negative number is positive.	$ -6 = 6$
The absolute value of 0 is 0.	$ 0 = 0$

Words	Properties of Equality	Algebra
Addition: When you add the same number to each side of an equation, the two sides remain equal.		Addition: $x - 5 = 6$ $+5 \quad +5$ $x = 11$
Subtraction: When you subtract the same number from each side of an equation, the two sides remain equal.		Subtraction: $x + 5 = 6$ $-5 \quad -5$ $x = 1$
Multiplication: When you multiply each side of an equation by the same nonzero number, the two sides remain equal.		Multiplication: $\frac{x}{3} = 4$ $\frac{x}{3} \cdot 3 = 4 \cdot 3$ $x = 12$
Division: When you divide each side of an equation by the same nonzero number, the two sides remain equal.		Division: $3x = 21$ $\frac{3x}{3} = \frac{21}{3}$ $x = 7$

Coordinate plane	
Formed by the intersection of a horizontal number line and a vertical number line	Ordered pairs (x, y) are plotted in a coordinate plane.
 The origin is at $(0, 0)$.	Example 