6th Grade Week 6 Packet

May 4th-May 8th, 2020

Parent/Student Work Directions: **Math**

Paquete de la Semana 6 de Sexto Grado

4 de Mayo - 8 de Mayo

Instrucciones de Trabajo para Padres/Estudiantes:

Matemáticas

Parent/Student Directions - Instrucciones para padres / estudiantes
Math: May 4th-May 8th, 2020

Monday/Lunes:

- Today's lesson will focus on appropriate measures.
- Starting on p. 845, complete the Real-World Link questions based on the Recycling description.
- Then, read and answer the questions on p. 846-848 making sure to focus on the concept box if you need help.
- After these pages have been completed, complete the Guided Practice problems on p. 848, the Independent Practice problems 1-4 on p. 849 and then Hot Problems #5-8 on p. 850.
- If you are having trouble, here is a link to a video explaining the topic: https://www.youtube.com/watch?v=2SNnRX7n02k

- La lección de hoy se centrará en las medidas apropiadas.
- Comenzando en la pág. 845, complete las preguntas de Real-World Link basadas en la descripción de Reciclaje.
- Luego, lea y responda las preguntas de la pág. 846-848 asegurándose de enfocarse en el cuadro de concepto si necesita ayuda.
- Después de completar estas páginas, complete los problemas de Práctica guiada en la pág. 848, los problemas de práctica independiente 1-4 en la p. 849 y luego Hot Problems # 5-8 en la pág. 850.
- Si tiene problemas, aquí hay un enlace a un video que explica el tema: https://www.youtube.com/watch?v=2SNnRX7n02k

Tuesday/Martes:

- Today's lesson will focus on line plots.
- Starting on p. 863, complete the Real-World Link questions based on the Activities description.
- Then, read and answer the questions on p. 864-866 making sure to focus on the concept box if you need help.
- After these pages have been completed, complete the Guided Practice problems on p. 866, the Independent Practice problems 1-3 on p. 867 and then Hot Problems #7-11 on p. 868.
- If you are having trouble, here is a link to a video explaining the topic: https://www.youtube.com/watch?v=V5kS5DY9x2g

- La lección de hoy se centrará en los trazados de línea.
- Comenzando en la pág. 863, complete las preguntas de Real-World Link basadas en la descripción de Actividades.
- Luego, lea y responda las preguntas de la pág. 864-866 asegurándose de enfocarse en el cuadro de concepto si necesita ayuda.
- Después de completar estas páginas, complete los problemas de Práctica guiada en la pág. 866, los Problemas de práctica independiente 1-3 en la p. 867 y luego Hot Problems # 7-11 en la pág. 868.
- Si tiene problemas, aquí hay un enlace a un video que explica el tema: https://www.youtube.com/watch?v=V5kS5DY9x2g

Wednesday/Miercoles:

- Today's lesson will focus on histograms.
- Starting on p. 871, complete the Real-World Link questions based on the Concerts description.
- Then, read and answer the questions on p. 872-874 making sure to focus on the concept box if you need help.
- After these pages have been completed, complete the Guided Practice problems on p. 874, the Independent Practice problems 1-8 on p. 875-876 and then Hot Problems #9-11 on p. 876.
- If you are having trouble, here is a link to a video explaining the topic: https://www.youtube.com/watch?v=y0T1NTl8WgM

- La lección de hoy se centrará en los histogramas.
- Comenzando en la pág. 871, complete las preguntas de Real-World Link basadas en la descripción de Conciertos.
- Luego, lea y responda las preguntas de la pág. 872-874 asegurándose de enfocarse en el cuadro de concepto si necesita ayuda.
- Después de completar estas páginas, complete los problemas de Práctica guiada en la pág. 874, los problemas de práctica independiente 1-8 en la p. 875-876 y luego Hot Problems # 9-11 en la pág. 876.
- Si tiene problemas, aquí hay un enlace a un video que explica el tema: https://www.youtube.com/watch?v=y0T1NTl8WgM

Thursday/Jueves:

- This is a catch-up day.
- Students can use the day complete any unfinished assignments and get any questions answered they may have by their teacher.
- You can ask me questions through phone, email or Dojo. Use the rest of your day to "sharpen the saw!"

- Este es un día de recuperación.
- Los estudiantes pueden usar el día para completar cualquier tarea no terminada y obtener cualquier pregunta que su maestro pueda responder.
- Puede hacerme preguntas por teléfono, correo electrónico o Dojo. Use el resto de su día para "afilar la sierra".

Friday/Viernes:

- Today's lesson will focus on determining the area of triangles.
- Using the ATI Galileo pages, read through the Determine the Area of Triangles slides and answering the questions that go with each slide.
- The information in the slides before the questions will help you if you are having trouble.
- Complete the Determine the Area of Triangles Test after going through the slides.

- La lección de hoy se centrará en determinar el área de los triángulos.
- Utilizando las páginas de ATI Galileo, lea las diapositivas Determine el área de triángulos y responda las preguntas que acompañan a cada diapositiva.
- La información en las diapositivas antes de las preguntas lo ayudará si tiene problemas.
- Complete la prueba Determinar el área de triángulos después de pasar por las diapositivas.

Lesson 5

Appropriate Measures

Real-World Link

Recycling The green committee had a recycling drive where they collected aluminum cans, plastic bottles, newspapers, and batteries. The weights collected on the first day are shown.

12.2 lb | 11 lb | 19.5 lb | 13 lb

1. Find the mean weight collected. _____

2. If the newspapers are not included, find the mean weight rounded to the nearest hundredth. _____

3. How does the weight of the newspapers affect the mean?

_____

_____

4. What is the median for the data set? How does the median differ if the newspapers are not included?

_____

_____

Which MP Mathematical Practices did you use? Shade the circle(s) that applies.

1. Persevere with Problems
2. Reason Abstractly
3. Construct an Argument
4. Model with Mathematics
5. Use Math Tools
6. Attend to Precision
7. Make Use of Structure
8. Use Repeated Reasoning

Essential Question

HOW are the mean, median, and mode helpful in describing data?

Common Core State Standards

Content Standards
6.SP.5, 6.SP.5c, 6.SP.5d

MP Mathematical Practices
1, 3, 4

Key Concept

Using Mean, Median, and Mode

Measure	Most appropriate when...
mean	• the data have no extreme values.
median	• the data have extreme values. • there are no big gaps in the middle of the data.
mode	• data have many repeated numbers.

Work Zone

Sometimes, one measure is more appropriate than others to use to summarize a data set.

Examples

Tutor

1. **The table shows the number of medals won by the U.S. Which measure of center best represents the data? Then find the measure of center.**

Year	1992	1996	2000	2004	2008
Number of Medals	112	101	97	103	110

Since the set of data has no extreme values or numbers that are repeated, the mean would best represent the data.

Mean $\frac{112 + 101 + 97 + 103 + 110}{5} = \frac{523}{5}$ or $104\frac{3}{5}$

The mean number of medals won is $104\frac{3}{5}$ medals.

2. **The table shows the water temperature over several days. Which measure of center best represents the data? Then find the measure of center.**

Water Temperature (°F)				
82	85	82	81	
82	82	78		

In the set of data, there are no extreme values. There is a temperature repeated four times, so the mode 82° is the measure of center that best represents the data.

Show your work.

Got it? **Do this problem to find out.**

a. The prices of several DVDs are $22.50, $21.95, $25.00, $21.95, $19.95, $21.95, and $21.50. Which measure of center best represents the data? Justify your selection. Then find the measure of center.

a. _____

Outliers and Appropriate Measure

Sometimes data sets contain outliers. Outliers are deviations from the majority of the data set. The outlier may affect the measures of center.

Examples

Tutor

The table shows average life spans of some animals.

Average Life Span	
Animal	**Life Span (years)**
African elephant	35
Bottlenose dolphin	30
Chimpanzee	50
Galapagos tortoise	200
Gorilla	30
Gray whale	70
Horse	20

3. Identify the outlier in the data set.

Compared to the other values, 200 years is extremely high. So, it is an outlier.

4. Determine how the outlier affects the mean, median, and mode of the data.

Find the mean, median, and mode with and without the outlier.

With the outlier

Mean $\frac{35 + 30 + 50 + 200 + 30 + 70 + 20}{7} \approx 62$

Median 35

Mode 30

Without the outlier

Mean $\frac{35 + 30 + 50 + 30 + 70 + 20}{6} \approx 39$

Median 32.5

Mode 30

The mean life span decreased by 62 − 39 or 23 years. The median life span decreased by 35 − 32.5 or 2.5 years. The mode did not change.

5. Which measure of center best describes the data with and without the outlier? Justify your selection.

The mean was affected the most with the outlier. The median life span changed very little with and without the outlier, so it best describes the data in both cases. The mode does not describe the data very well since there were only two repeated numbers.

Outliers

In Example 3, 200 is an outlier.

IQR = 40

40 · 1.5 = 60

70 + 60 = 130

200 > 130

So, 200 is an outlier.

STOP and Reflect

If a data set has an outlier, why might you use the median instead of the mean?

Got it? Do these problems to find out.

The prices of some new athletic shoes are shown in the table.

Price of Athletic Shoes			
$51.95	$47.50	$46.50	$48.50
$52.95	$78.95	$39.95	

b. Identify the outlier in the data set.

c. Determine how the outlier affects the mean, median, and mode of the data.

d. Tell which measure of center best describes the data with and without the outlier.

Guided Practice

1. The table shows the required temperatures for different recipes. (Examples 1–5)

Cooking Temperature (°F)			
175	325	325	350
350	350	400	450

a. Identify the outlier in the data set.

b. Determine how the outlier affects the mean, median, and mode of the data.

c. Tell which measure of center best describes the data with and without the outlier. Justify your selection.

2. **Building on the Essential Question** How does an outlier affect the mean, median, and mode of a data set?

Rate Yourself!

How well do you understand choosing the appropriate measure of center for a data set? Circle the image that applies.

For more help, go online to access a Personal Tutor.

Name _____ My Homework _____

Independent Practice

Go online for Step-by-Step Solutions eHelp

1. The number of minutes spent studying are: 60, 70, 45, 60, 80, 35, and 45. Find the measure of center that best represents the data. Justify your selection and then find the measure of center. (Examples 1 and 2)

2. The table shows monthly rainfall in inches for five months. Identify the outlier in the data set. Determine how the outlier affects the mean, median, and mode of the data. Then tell which measure of center best describes the data with and without the outlier. Round to the nearest hundredth. Justify your selection. (Examples 3–5)

Month	June	July	Aug.	Sept.	Oct.	Nov.
Rainfall (in.)	6.14	7.19	8.63	8.38	6.47	2.43

3. The table shows the average depth of several lakes.

Lake	Depth (ft)
Crater Lake	1,148
East Okoboji	10
Lake Gilead	43
Lake Erie	62
Great Salt Lake	14
Medicine Lake	24

a. Identify the outlier in the data set. _____

b. Determine how the outlier affects the mean, median, mode, and range of the data. _____

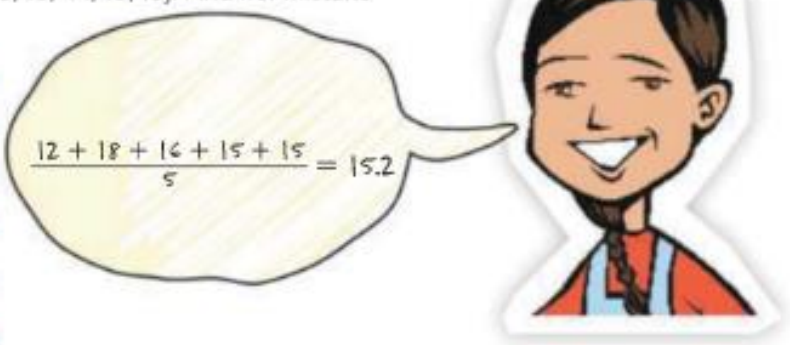
c. Tell which measure of center best describes the data with and without the outlier. _____

4. MP **Construct an Argument** Fill in the graphic organizer below.

Measure of Center	How can an outlier affect it?
mean	
median	
mode	

H.O.T. Problems Higher Order Thinking

5. MF **Find the Error** Pilar is determining which measure of center best describes the data set {12, 18, 16, 44, 15, 15}. Find her mistake and correct it.



6. MF **Justify Conclusions** Determine whether the following statement is *true* or *false*. If true, explain your reasoning. If false, give a counterexample.

Of mean, median, and mode, the median will always be most affected by outliers.

7. MF **Persevere with Problems** Add three data values to the following data set so the mean increases by 10 and the median does not change.

42, 37, 32, 29, 20

8. MF **Model with Mathematics** Use the Internet to find some real-world data. Record your data in the space below.

a. Find the mean, median, and mode of your data set.

b. Are there any outliers? If so, how do they affect the measures of center?

c. Which measure of center best describes the data with and without the outlier?

Lesson 1

Line Plots

Real-World Link

Activities Students in Mr. Cotter's class were asked how many after-school activities they have. Their responses are shown in the table.

Step 1 Use the data to complete the frequency table.

Number of Activities			
0	2	1	3
1	1	3	4
2	1	0	1
2	3	2	1

→

Number of Activities	
Number	Tally
0	
1	
2	
3	
4	

Step 2 Turn the table so the number of activities is along the bottom on a number line. Instead of tally marks, place Xs above the number line. The Xs for 0 activities have been placed for you.

The data is now represented in a *line plot*.

Which MP **Mathematical Practices** did you use? Shade the circle(s) that applies.

- ① Persevere with Problems
- ② Reason Abstractly
- ③ Construct an Argument
- ④ Model with Mathematics
- ⑤ Use Math Tools
- ⑥ Attend to Precision
- ⑦ Make Use of Structure
- ⑧ Use Repeated Reasoning

Essential Question

WHY is it important to carefully evaluate graphs?

Vocabulary

line plot
dot plot

Common Core State Standards

Content Standards
6.SP.4, 6.SP.5, 6.SP.5a, 6.SP.5b, 6.SP.5c

MP **Mathematical Practices**
1, 3, 4

Work Zone

Make a Line Plot

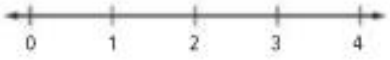
One way to give a picture of data is to make a line plot. A **line plot** is a visual display of a distribution of data values where each data value is shown as a dot or other mark, usually an X, above a number line. A line plot is also known as a **dot plot**.

Example

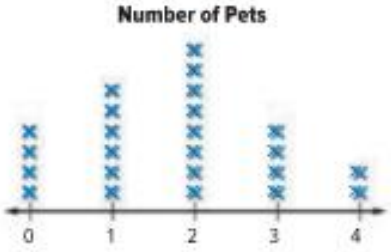
1. **Jasmine asked her class how many pets they had. The results are shown in the table. Make a line plot of the data. Then describe the data presented in the graph.**

Number of Pets					
3	2	2	1	3	1
0	1	0	2	3	4
0	1	1	4	2	2
1	2	2	3	0	2

Step 1 Draw and label a number line.



Step 2 Place as many Xs above each number as there are responses for that number. Include a title.



Step 3 Describe the data. 24 students responded to the question. No one has more than 4 pets. Four students have no pets. The response given most is 2 pets. This represents the mode.

Got it? **Do this problem to find out.**

a. Javier asked the members of his 4-H club how many projects they were taking. The results are shown in the table. Make a line plot of the data. Then describe the data in the graph.

Number of Projects				
2	4	3	3	1
0	5	4	2	2
1	3	2	1	2

Analyze Line Plots

You can describe a set of data using measures of center as well as measures of variability. The range of the data and any outliers are also useful in describing the data.

Examples

The line plot shows the prices of cowboy hats.

2. Find the median and mode of the data. Then describe the data using them.

There are 16 hat prices, in dollars, represented in the line plot. The median is between the 8th and 9th pieces of data.

The two middle numbers, shown on the line plot, are 40 and 45. So, the median is $42.50. This means that half of the cowboy hats cost more than $42.50 and half cost less than $42.50.

The number that appears most often is 50. So, the mode of the data is 50. This means that more cowboy hats cost $50 than any other price.

3. Find the range and any outliers of the data. Then describe the data using them.

The range of the prices is $75 − $30 or $45. The limits for the outlier are $12.50 and $72.50. So, $75 is an outlier.

Got it? Do this problem to find out.

b. The line plot shows the number of magazines each member of the student council sold. Find the median, mode, range, and any outliers of the data. Then describe the data using them.

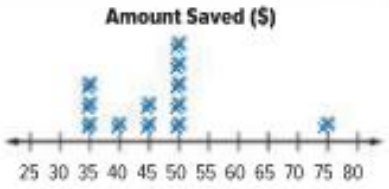
STOP and Reflect

Suppose two sets of data have the same median but different ranges. What can you conclude about the sets? Explain below.

b. _____

Example

4. **The line plot shows the amount James deposited in his savings account each month. Describe the data. Include measures of center and variability.**



The mean is $46.67. The median is $47.50, and the mode is $50. So, the majority of the data are close to the measures of center.

The range of the data is $75 − $35 or $40. The interquartile range is $Q_3 - Q_1$, or $50 − $37.50 = $12.50. So, half of the amounts are between $37.50 and $50. There is one outlier at $75.

Got it? **Do this problem to find out.**

c. The line plot shows the prices of sweaters in a store. Describe the data. Include measures of center and variability.

c. _____

Guided Practice

1. Make a line plot for the set of data. Describe the data. Include measures of center and variability. (Examples 1–4)

Calories in Serving of Peanut Butter			
190	160	210	210
200	185	190	190
185	200	190	210
190	185	200	200

2. **Building on the Essential Question** How is using a line plot useful to analyze data? _____

Rate Yourself!

How confident are you about line plots? Check the box that applies.

For more help, go online to access a Personal Tutor.

FOLDABLES Time to update your Foldable!

Name _____ My Homework _____

Independent Practice

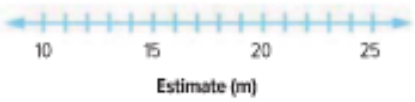
Go online for Step-by-Step Solutions

Make a line plot for each set of data. Find the median, mode, range, and any outliers of the data shown in the line plot. Then describe the data using them. (Examples 1–3)

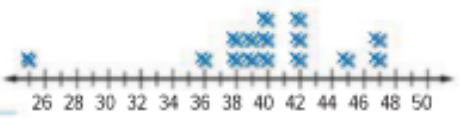
1. Length of summer camps in days:
7, 7, 12, 10, 5, 10, 5, 7, 10, 9, 7, 9, 6, 10, 5, 8, 7, and 8

2.

Students' Estimates of Room Length (m)				
10	11	12	12	13
13	13	14	14	14
15	15	15	15	15
16	16	16	17	17
17	17	18	18	25



3. The line plot shows the number of songs in play lists. Describe the data. Include measures of center and variability. (Example 4)

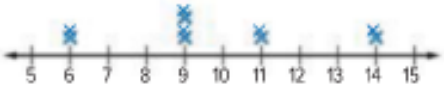


MP **Inductive Reasoning** **The number of runs a softball team scored in their last five games is shown in the line plot. How many runs would the team need to score in the next game so that each statement is true?**

4. The range is 10. _____

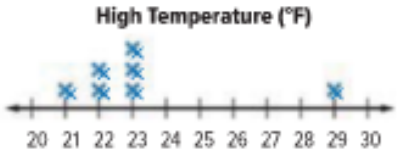
5. Another mode is 11. _____

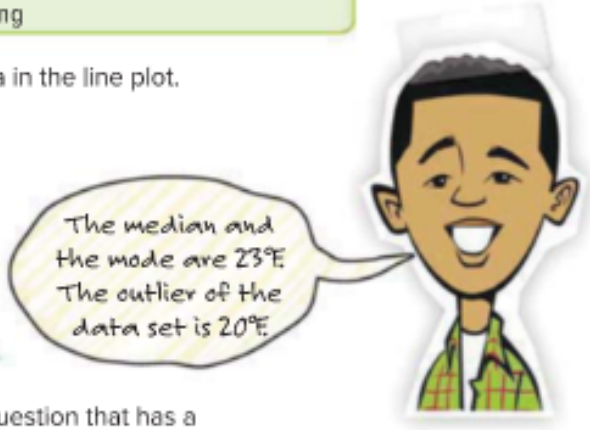
6. The median is 9.5. _____



H.O.T. Problems Higher Order Thinking

7. **Find the Error** Dwayne is analyzing the data in the line plot. Find his mistake and correct it.





8. **Model with Mathematics** Write a survey question that has a numerical answer. Some examples are "How many CDs do you have?" or "How many feet long is your bedroom?" Ask your friends and family the question. Record the results and organize the data in a line plot. Use the line plot to make conclusions about your data. For example, describe the data using the measures of center and variability.

Show your work.

9. **Persevere with Problems** There are several sizes of flying disks in a collection. The range is 8 centimeters. The median is 22 centimeters. The smallest size is 16 centimeters. What is the largest disk in the collection?

10. **Construct an Argument** Determine whether the statement is *true* or *false*. Explain.

Line plots display individual data.

11. **Reason Inductively** The line plot shows the number of student visitors to the National Wildlife Refuge each day for two weeks. If the four Xs at 56 were not included in the data set, which measure of center would be most affected? Justify your response.

Lesson 2

Histograms

Real-World Link

Concerts Alicia researched the average price of concert tickets. The table shows the results.

Average Ticket Prices of Top 10 Money-Earning Concerts				
$83.87	$68.54	$51.53	$62.10	$59.58
$47.22	$66.58	$88.49	$50.63	$68.98

1. Fill in the tally column and frequency column on the frequency table.

Average Ticket Prices of Top 10 Money-Earning Concerts		
Price	Tally	Frequency
$25.00–$49.99		
$50.00–$74.99		
$75.00–$99.99		

2. What does each tally mark represent? _____

3. What is one advantage of using the frequency table?

_____

_____

4. What is one advantage of using the first table?

_____

_____

Essential Question

WHY is it important to carefully evaluate graphs?

Vocabulary

histogram

frequency distribution

Common Core State Standards

Content Standards
6.SP.4, 6.SP.5, 6.SP.5a, 6.SP.5b

Mathematical Practices
1, 3, 4, 5, 6

Which **Mathematical Practices** did you use? Shade the circle(s) that applies.

1. Persevere with Problems
2. Reason Abstractly
3. Construct an Argument
4. Model with Mathematics
5. Use Math Tools
6. Attend to Precision
7. Make Use of Structure
8. Use Repeated Reasoning

Work Zone

Interpret Data

Data from a frequency table can be displayed as a histogram. A **histogram** is a type of bar graph used to display numerical data that have been organized into equal intervals. These intervals allow you to see the **frequency distribution** of the data, or how many pieces of data are in each interval.

Example

Tutor

1. **Refer to the histogram above. Describe the histogram. How many remote control airplanes cost at least $100?**

There are 9 + 7 + 1 + 2 + 1 or 20 prices, in dollars, recorded. More remote control airplanes had prices between $25.00 and $49.99 than any other range. There were no airplanes recorded with a price between $125.00 and $149.99.

Two remote control airplanes had prices between $100.00–$124.99 and one remote control airplane had a price between $150.00–$174.99. So, 2 + 1, or 3, remote control airplanes had prices that were at least $100.

Show your work.

Got it? **Do this problem to find out.**

a. Refer to the histogram above. How many remote control airplanes cost less than $75?

a. _____

Construct a Histogram

You can use data from a table to construct a histogram.

Example

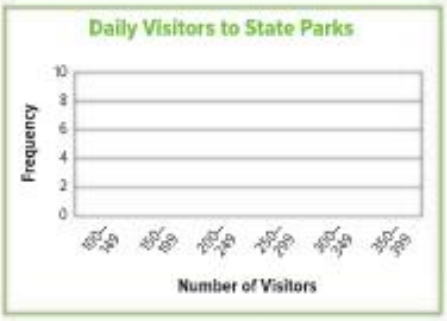
2. **The table shows the number of daily visitors to selected state parks. Draw a histogram to represent the data.**

Daily Visitors to Selected State Parks				
108	209	171	152	236
165	244	263	212	161
327	185	192	226	137
193	235	207	382	241

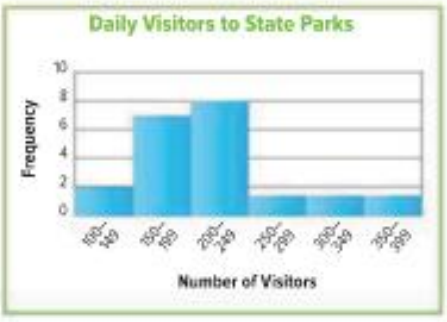
Step 1 Make a frequency table to organize the data. Use a scale from 100 through 399 with an interval of 50.

Daily Visitors to Selected State Parks		
Visitors	Tally	Frequency
100–149	||	2
150–199	𝍸 ||	7
200–249	𝍸 |||	8
250–299	|	1
300–349	|	1
350–399	|	1

Step 2 Draw and label a horizontal and vertical axis. Include a title. Show the intervals from the frequency table on the horizontal axis. Label the vertical axis to show the frequencies.



Step 3 For each interval, draw a bar whose height is given by the frequencies.



Scales and Intervals

It is important to choose a scale that includes all of the numbers in the data set. The interval should organize the data to make it easy to compare.

STOP and Reflect

When is a histogram more useful than a table with individual data? Explain below.

Got it? Do this problem to find out.

b. The table at the right shows a set of test scores. Choose intervals, make a frequency table, and construct a histogram to represent the data.

Test Scores						
72	97	80	86	92	98	88
76	79	82	91	83	90	76
81	94	96	92	72	83	85
65	91	92	68	86	89	97

Test Scores		
Score	Tally	Frequency

Guided Practice

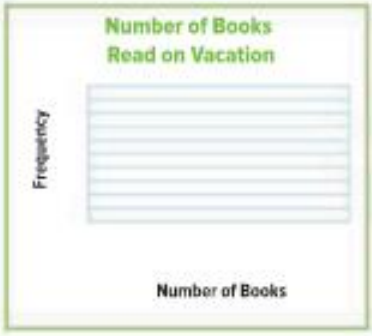
1. The frequency table below shows the number of books read on vacation by the students in Mrs. Angello's class. (Examples 1 and 2)

   a. Draw a histogram to represent the data.

   b. Describe the histogram. _____

   _____

   c. How many students read six or more books? _____



Number of Books Read		
Books	Tally	Frequency
0–2	𝍸 |	6
3–5	𝍸 𝍸	10
6–8	𝍸 ||	7
9–11	|||	3
12–14	||||	4

2. **Building on the Essential Question** Why would you create a frequency table before creating a histogram?

_____

_____

_____

Rate Yourself!

Are you ready to move on? Shade the section that applies.

For more help, go online to access a Personal Tutor. Tutor

FOLDABLES Time to update your Foldable!

Name _____ My Homework _____

Independent Practice

Go online for Step-by-Step Solutions

For Exercises 1–4, use the histogram at the right. (Example 1)

1. Describe the histogram. _____

2. Which interval has 7 cyclists? _____

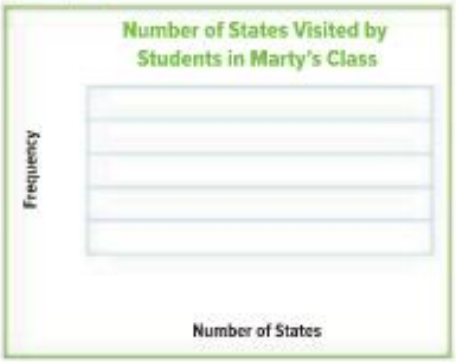
3. Which interval represents the greatest number of cyclists?

4. How many cyclists had a time less than 70 minutes?

Draw a histogram to represent the set of data. (Example 2)

5.

Number of States Visited by Students in Marty's Class		
Number of States	Tally	Frequency
0–4	𝍸 ||||	9
5–9	|||	3
10–14	𝍸	5
15–19	|||	3
20–24	𝍸 |	6
25–29	|	1



Use Math Tools **For Exercises 6 and 7, refer to the histograms below.**

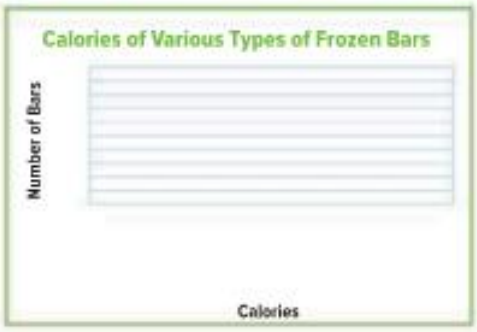
6. About how many students from both grades earned $600 or more?

7. Which grade had more students earn between $400 and $599?

8. **Be Precise** The following data provides the number of Calories of various types of frozen bars.
{25, 35, 200, 280, 80, 80, 90, 40, 45, 50, 50, 60, 90, 100, 120, 40, 45, 60, 70, 350}

a. Draw a histogram to represent the data.

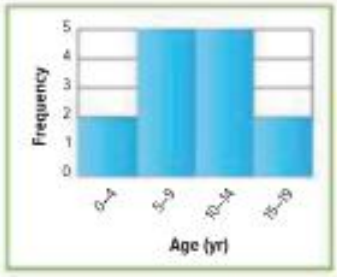
b. Find the measures of center.

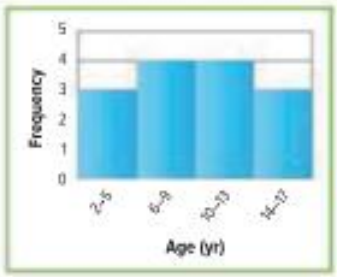


c. Can you find the measures of center only from the histogram? Explain.

H.O.T. Problems Higher Order Thinking

9. **Persevere with Problems** Give a set of data that could be represented by both histograms below.





10. **Justify Conclusions** Identify the interval that is not equal to the other three. Explain your reasoning.

15–19 | 30–34 | 40–45 | 45–49

11. **Reason Inductively** The table shows a set of plant heights. Describe two different sets of intervals that can be used in representing the set in a histogram. Compare and contrast the two sets of intervals.

Plant Heights (in.)		
12	7	15
8	24	41
16	18	27
43	33	11
24	10	22

Determine the Area of Triangles

Slide 1

What You Will Learn

You will learn how to find the area of a triangle.

Slide 2

Key Words

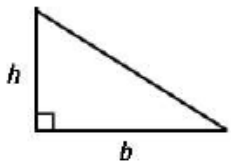
triangle – three-sided polygon (shape)

Slide 3

How to Find the Area of a Triangle - Part 1

When finding the area of a triangle, you need two things, the length of the base and the height.

You will multiply the base and the height together. The product is then divided by 2.



$A = \frac{bh}{2}$

Slide 4

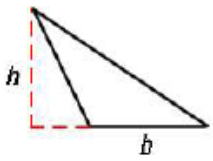
How to Find the Area of a Triangle - Part 2

In our previous example, we saw the height being the length of one of the sides of the triangle. The height is not always one of the sides.

The height is the distance from the base to the highest point of the triangle. It cannot be measured by the length of one of the slanted sides of the triangle.

This difference does not affect the area. We will still use the same equation to find the area of the triangle.

Looking at our example below, we see that the height is not a length of one of the sides of the triangle.



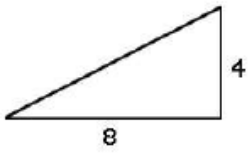
$A = \frac{bh}{2}$

Slide 5

Examples

The following are two examples of finding the area of a triangle.

$A = \frac{bh}{2}$

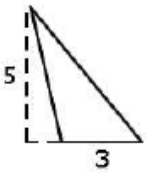


$b = 8$
$h = 4$

$A = \frac{(8)(4)}{2}$

$= \frac{32}{2}$

$= 16$



$b = 3$
$h = 5$

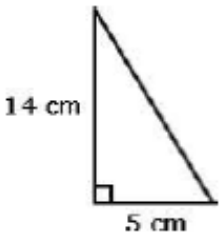
$A = \frac{(3)(5)}{2}$

$= \frac{15}{2}$

$= 7.5$

Slide 6

What is the area of the triangle shown below?



A) 15 square centimeters

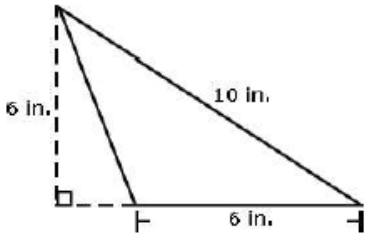
B) 19 square centimeters

C) 35 square centimeters

D) 70 square centimeters

Slide 7

What is the area of the triangle shown below?



A) 12 square inches

B) 18 square inches

C) 22 square inches

D) 36 square inches

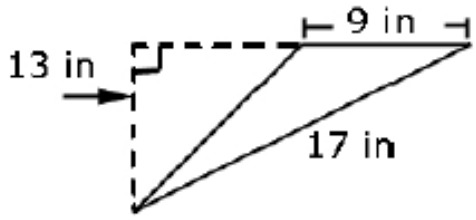
Slide 8

What You Learned

You learned how to find the area of a triangle.

Determine the Area of Triangles Test

1) What is the area of the triangle shown below?



A) 58.5 square inches

B) 76.5 square inches

C) 117 square inches

D) 153 square inches