Name _____

15.1 Make Frequency Tables

TEKS Data Analysis—5.9.A

MATHEMATICAL PROCESSES 5.1.B, 5.1.E

Essential Question

How can you display data in a frequency table?

Frequency is the number of times an event occurs. A **frequency table** is a table that uses numbers to record data about how often something happens.

Unlock the Problem

Real World

Bart kept a record of the sizes of bags of peanuts he sold at a baseball game.

Bags of Peanuts Sold (Sizes)						
M	S	XL	M	XL	S	L
S	S	L	XL	XL	L	XL
XL	XL	S	M	L	L	S
S	XL	L	S	XL	M	M

Make a frequency table of the data.

STEP 1: Write the title at the top of the frequency table.

STEP 2: List the sizes of bags of peanuts in the first column.

STEP 3: Record the frequency of each size of bag of peanuts sold in the frequency column.

Size	**Frequency**

- If you want to know quickly how many large bags of peanuts Bart sold, would you use his record or would you use the frequency table? **Explain**.

_____

_____

Try This! **Make a frequency table.**

A librarian records the types of books students checked out one morning. Make a frequency table of the data.

- Write a title for the frequency table.
- List the types of books in the first column.
- Record the frequency of each type of book in the second column.

Books Checked Out			
adventure	mystery	adventure	biography
adventure	mystery	adventure	biography
biography	adventure	mystery	adventure
mystery	adventure	biography	adventure

Types of Books	**Frequency**

Share and Show

Len records the methods of transportation his classmates take to school. Use the data for 1–2.

Transportation to School		
bus	walk	car
walk	walk	bus
bus	bus	walk
car	bus	car
walk	bus	bus
bus	car	walk
car	walk	bus

1. What is a good title for a frequency table of the data?

_____

What will be in the first column of the frequency table?

_____

What will be in the second column of the frequency table?

_____

2. Make a frequency table.

Math Talk

Mathematical Processes

Explain how you found the frequency of each method of transportation.

Name _____

Problem Solving

A swimming coach records the events swimmers on a team are competing in. Use the data for 3–4.

Swimming Events		
freestyle	backstroke	butterfly
backstroke	breaststroke	freestyle
freestyle	backstroke	freestyle
breaststroke	butterfly	backstroke
backstroke	freestyle	butterfly
freestyle	backstroke	butterfly

3. Make a frequency table of the data. **Explain** how you determine what to put in the first column of the table.

4. **Multi-Step** How can you prove that the total number of frequencies in your table is correct?

Problem Solving Real World

A restaurant owner recorded salsa flavors that customers asked for at dinner. Use the data for 5–7.

Salsa Flavors									
hot	mild	chunky	hot	mild	mild	spicy	hot	hot	spicy
spicy	chunky	spicy	chunky	chunky	spicy	hot	spicy	hot	hot

5. **Representations** Make a frequency table of the data.

6. H.O.T. **Describe** how the frequency table will change if 4 customers switch from chunky salsa to spicy salsa and 3 customers switch from mild salsa to hot salsa.

7. H.O.T. **Multi-Step** Think of a topic for a frequency table. Record a set of data for the topic. Use the data to make a frequency table.

Write Math **Show Your Work**

Mathematical Processes
Model • Reason • Communicate

Daily Assessment Task

Fill in the bubble completely to show your answer.

8. Marsha records the breeds of dogs in a dog show. Then she makes a frequency table to show the data. How many different breeds of dogs will be in the frequency table?

Ⓐ 2 Ⓒ 3

Ⓑ 12 Ⓓ 4

Breeds of Dogs			
beagle	pug	bulldog	pug
beagle	bulldog	poodle	bulldog
bulldog	poodle	beagle	bulldog

Students place an order for different sizes of school sweatshirts. They make a frequency table to show the data. Use the frequency table for 9–10.

9. Students order sizes large, small, large, large, medium, small, large, small, large, medium, and small. What frequency should be in the row for medium in the frequency table?

Ⓐ 5 Ⓒ 4

Ⓑ 2 Ⓓ 3

Sweatshirt Order	
Size	Frequency
Small	?
Medium	?
Large	?

10. **Multi-Step** Students pay $14 for size small sweatshirts and $16 for size large. How much do they pay for the size small and large sweatshirts they order?

Ⓐ $56 Ⓒ $80

Ⓑ $136 Ⓓ $30

TEXAS Test Prep

11. Paula recorded the colors of all her shoes.

Shoe Colors				
blue	black	red	blue	blue
black	blue	white	red	black
red	purple	white	blue	red

She makes a frequency table of the data. What is the frequency of red shoes?

Ⓐ 3 Ⓒ 15

Ⓑ 4 Ⓓ 2

TEKS Data Analysis —5.9.A
MATHEMATICAL PROCESSES 5.1.B, 5.1.E

Name _____

15.1 Make Frequency Tables

Patricia records the types of penguins she sees in the Antarctic exhibit at the zoo. Use the data for 1–2.

Antarctic Penguins		
King	Chinstrap	Gentoo
Chinstrap	King	Macaroni
Rockhopper	Chinstrap	King
Gentoo	Gentoo	Gentoo
Macaroni	King	Chinstrap
Rockhopper	Rockhopper	Chinstrap

1. What is a good title for a frequency table of the data?

   _____

   What will be in the first column of the frequency table?

   _____

   What will be in the second column of the frequency table? _____

2. Complete the frequency table at the right.

Problem Solving Real World

Mr. Rexford's students recorded the polygons in a sculpture at the modern art museum. Use the data for 3–4.

Polygons				
triangle	rectangle	hexagon	rectangle	rectangle
hexagon	hexagon	pentagon	hexagon	triangle
hexagon	triangle	pentagon	rectangle	rectangle

3. Complete the frequency table of the data.

4. Which polygon had the greatest frequency?
   Which polygon had the least frequency?

   _____

   _____

Lesson Check

TEXAS Test Prep

Fill in the bubble completely to show your answer.

5. Milo records the types of shells he collects on the Texas coast. Then he makes a frequency table to show the data. How many different types of shells will be in the frequency table?

Ⓐ 20
Ⓑ 4
Ⓒ 5
Ⓓ 3

Shells Collected			
clam	clam	conch	whelk
cockle	cockle	clam	scallop
cockle	clam	conch	scallop
scallop	cockle	clam	scallop
clam	scallop	whelk	conch

6. Carmen recorded the types of vehicles she saw while looking out the window of her father's car. She makes a frequency table of the data. What is the frequency of motorcycles?

Ⓐ 5
Ⓑ 6
Ⓒ 7
Ⓓ 3

Vehicles		
motorcycle	truck	sports car
truck	motorcycle	truck
sports car	motorcycle	SUV
motorcycle	truck	SUV
SUV	SUV	sports car
SUV	truck	motorcycle
motorcycle	truck	SUV

Josef has a pottery booth at the craft fair. He makes a frequency table to record the types of pottery sold one day. Use the frequency table for 7–8.

Pottery Sold	
Type	**Frequency**
Bowl	12
Mug	?
Plate	5
Vase	8

7. **Multi-Step** The number of mugs Josef sold is one fourth of the combined number of bowls and vases sold. What frequency should be in the row for mug in the frequency table?

Ⓐ 3
Ⓑ 5
Ⓒ 2
Ⓓ 80

8. **Multi-Step** The price of a plate is $6 and the price of a mug is $5. How much did Josef collect from the plates and the mugs he sold?

Ⓐ $55
Ⓑ $25
Ⓒ $30
Ⓓ $11