



Student Workbook

GRADE
2

UNIT
1

Name

Adding, Subtracting, and Working with Data



Imagine IM is the certified Illustrative Mathematics® curriculum optimized for engagement, accessibility, and usability.

Adding, Subtracting, and Working with Data

Section A: Add and Subtract within 20

Lesson 1	Add and Subtract within 10	4
Lesson 2	Relate Addition and Subtraction within 10	9
Lesson 3	Relate Addition and Subtraction within 20	13
Lesson 4	Add and Subtract Your Way	15
Lesson 5	Add within 50	19
Lesson 6	Center Day 1	25
	Practice Problems	26

Section B: Ways to Represent Data

Lesson 7	Collect and Represent Data	36
Lesson 8	Interpret Picture Graphs	43
Lesson 9	Interpret Bar Graphs	51
Lesson 10	Represent Data Using Picture Graphs and Bar Graphs	55
Lesson 11	Questions about Data	61
Lesson 12	Center Day 2	65
	Practice Problems	66

Section C: Diagrams to Compare

Lesson 13	Use Bar Graphs to Compare	76
Lesson 14	Use Diagrams to Compare	79
Lesson 15	Diagrams with All Kinds of Compare Problems	87
Lesson 16	Solve All Kinds of Compare Problems	91
Lesson 17	Center Day 3	95
Lesson 18	Class Surveys	97
	Practice Problems	101

Glossary	107
-----------------	------------

Attributions	108
---------------------	------------

GO ONLINE



Go online to
find the videos
for this unit.



VIDEOS

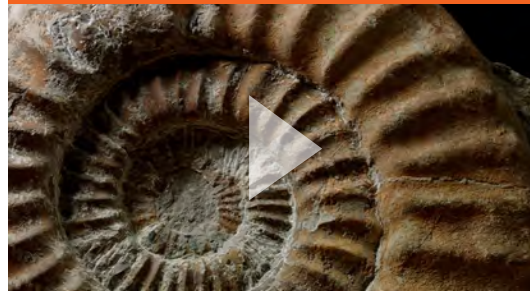
FAMILY SUPPORT

Unit 1 Family Support video



INSPIRE MATH

Fossils at the Beach video



Section

A

Add and Subtract within 20



I will add and subtract within 20.

Alignments

Building On
1.NBT.C.4, 1.OA.A.1,
1.OA.C.6

Addressing
2.NBT.B.5, 2.OA.B.2

Building Towards
2.OA.B.2

Mathematical Practice
MP2, MP3, MP6, MP7



Name

Date

Lesson 1

Add and Subtract within 10

Let's add and subtract within 10.



WARM-UP What Do You Know About ___?



What Do You Know About Math?

What do you know about math?

1

Check It Off: Add or Subtract within 10

- 1 Choose 2 cards. Find the value of the sum or difference.
- 2 Check off the number you found. Write the expression.
- 3 The partner who checks off the most numbers wins.

	✓ found it!	expression
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

2

What's the Value?

1 Match each expression to the value of the sum or difference.

- $5 + 3$
- $3 - 1$
- $10 - 1$
- $4 + 5$
- $6 + 3$
- $6 - 5$
- $1 + 6$
- $9 - 5$
- $8 - 5$
- $3 + 6$
- 9
- 3
- 8
- 7
- 1
- 4
- 2

2 Circle the addition expressions with a value of 10.

0 + 0	0 + 1	0 + 2	0 + 3	0 + 4	0 + 5	0 + 6	0 + 7	0 + 8	0 + 9	0 + 10
1 + 0	1 + 1	1 + 2	1 + 3	1 + 4	1 + 5	1 + 6	1 + 7	1 + 8	1 + 9	
2 + 0	2 + 1	2 + 2	2 + 3	2 + 4	2 + 5	2 + 6	2 + 7	2 + 8		
3 + 0	3 + 1	3 + 2	3 + 3	3 + 4	3 + 5	3 + 6	3 + 7			
4 + 0	4 + 1	4 + 2	4 + 3	4 + 4	4 + 5	4 + 6				
5 + 0	5 + 1	5 + 2	5 + 3	5 + 4	5 + 5					
6 + 0	6 + 1	6 + 2	6 + 3	6 + 4						
7 + 0	7 + 1	7 + 2	7 + 3							
8 + 0	8 + 1	8 + 2								
9 + 0	9 + 1									
10 + 0										

3 What patterns do you notice in the expressions with a value of 10?

Notes

Name

Date

Lesson 2

Relate Addition and Subtraction within 10

Let's think about how addition and subtraction relate.



WARM-UP What Do You Know About ___?



What Do You Know About 10?

What do you know about 10?

- 1 Write as many equations as you can to represent the cube trains.



- 2 Find the number that makes each equation true.
Then write the letter of the cube train that represents the equation.

$3 + \underline{\quad} = 10$ Letter:

$10 - 7 = \underline{\quad}$ Letter:

$10 - 5 = \underline{\quad}$ Letter:

$2 + \underline{\quad} = 10$ Letter:

$10 - 1 = \underline{\quad}$ Letter:

$10 - 2 = \underline{\quad}$ Letter:

$\underline{\quad} + 6 = 10$ Letter:

$\underline{\quad} + 9 = 10$ Letter:

$5 + \underline{\quad} = 10$ Letter:

$10 - \underline{\quad} = 4$ Letter:

Notes

Name

Date

Lesson 3

Relate Addition and Subtraction within 20

Let's find the number that makes each equation with 20 true.



WARM-UP Number Talk



Addition and Subtraction

Find the value of each expression mentally.

A $7 + 3$

B $10 - 7$

C $10 - 2$

D $10 - 4$

2

Make the Equation True

Find the number that makes each equation true.

1 $4 + \underline{\quad} = 20$

2 $20 - \underline{\quad} = 4$

3 $6 + \underline{\quad} = 20$

4 $20 - \underline{\quad} = 10$

5 $\underline{\quad} + 3 = 20$

6 $20 - 15 = \underline{\quad}$

7 $20 - \underline{\quad} = 18$

8 If you have time: $\underline{\quad} - 5 = 20$

Name

Date

Lesson 4

Add and Subtract Your Way

Let's add and subtract within 20.



WARM-UP Number Talk



Make 10

Find the value of each sum mentally.

A $8 + 2$

B $8 + 3$

C $8 + 5$

D $7 + 6$

1

Revisit How Close—Add to 20

5

8

2

4

6

2

Add and Subtract within 20

Find the value of each expression.

Show your thinking using drawings, numbers, or words.

1 $4 + 9$ _____

2 $15 - 3$ _____

3 $7 + 6$ _____

4 $17 - 9$ _____

5 $14 + 5$ _____

6 $12 - 4$ _____

7 $6 + 12$ _____

8 $16 - 5$ _____

Name

Date

Lesson 5

Add within 50

Let's add within 50.



WARM-UP Number Talk



2-Digit, 1-Digit

Find the value of each sum mentally.

A $16 + 3$

B $16 + 5$

C $26 + 5$

D $38 + 6$

1

Revisit How Close—Add to 100

3

8

4

6

6

2

1

2

Add within 50

Find the value of each expression. Show your thinking using drawings, numbers, or words.

1 $37 + 8$ _____

2 $24 + 23$ _____



3 $16 + 30$ _____

4 $39 + 11$ _____

5 $27 + 15$ _____

Name

Date

SECTION

A

Summary

We used what we know about making 10 to add and subtract.
We used different ways to find an unknown number in an equation.



$10 - 5 = \underline{\quad}$

$5 + \underline{\quad} = 10$

$2 + \underline{\quad} = 10$

$10 - 8 = \underline{\quad}$

Notes



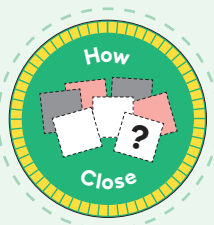
Lesson

6

Name _____

Center Day 1

Let's add and subtract.



WARM-UP

Number Talk



Teen Numbers, 2-Digit Numbers

Find the value of each expression mentally.

A $14 + 22$

B $19 + 22$

C $15 + 25$

D $17 + 25$

SECTION

A

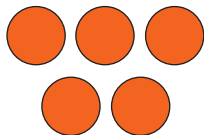
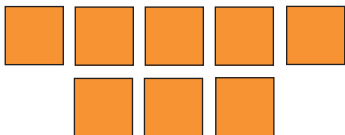
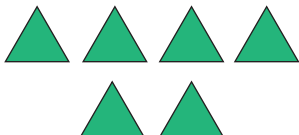
Practice Problems

1

Pre-unit

The picture shows how Jada sorts the shapes on her table.

Shapes on the Table

circles	squares	triangles
		

- a. How many squares? _____
- b. How many triangles? _____
- c. Which shape has the fewest number? _____

2

Pre-unit

The table shows the favorite magical powers of some students.

Favourite Magical Power

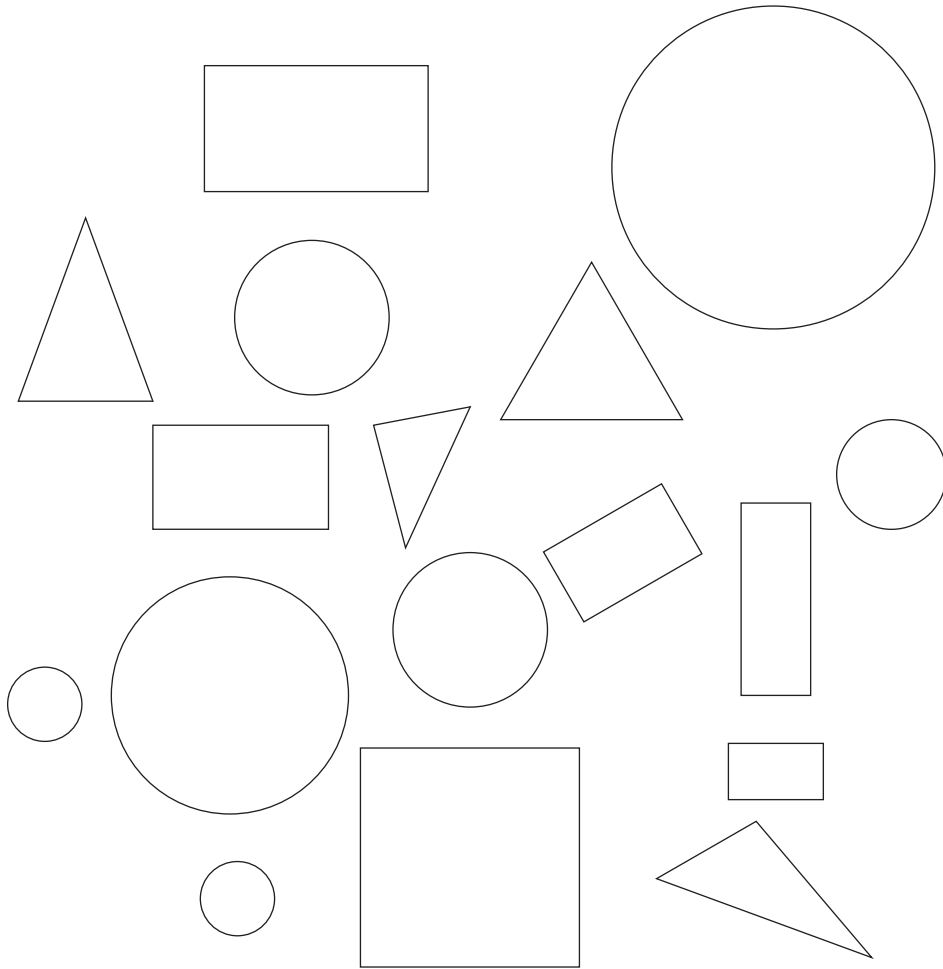
read minds	become invisible	fly
6	8	3

- How many more students prefer being invisible to flying?

- How many fewer students prefer flying to reading minds?

3

Pre-unit



Count each kind of shape. Write the numbers on the chart.

Shapes

circle	triangle	rectangle
6	8	3

4

from Unit 1, Lesson 1

Find the value of each expression.

a. $9 - 2$ _____

b. $5 + 3$ _____

c. $2 + 8$ _____

d. $7 - 4$ _____

e. $10 - 3$ _____

f. $1 + 6$ _____

5

from Unit 1, Lesson 2

Jada plays “What's Behind My Back?” with Han. Han has 10 connecting cubes. He shows Jada these cubes.



a. How many connecting cubes are behind Han's back?

b. Write an addition equation that matches the game.

c. Write a subtraction equation that matches the game.

6

from Unit 1, Lesson 3

Find the number that makes each equation true. Show your thinking using drawings, numbers, or words.

a. $20 - 10 = \underline{\hspace{2cm}}$

b. $17 + \underline{\hspace{2cm}} = 20$

c. $20 = 5 + \underline{\hspace{2cm}}$

d. $7 = 20 - \underline{\hspace{2cm}}$

7

from Unit 1, Lesson 4

Here are 7 numbers on cards.

1 2 3 5 6 7 9

- a. Choose 3 numbers to add. Get as close as you can to 20.
- b. Write the equation.

8

from Unit 1, Lesson 5

Find the value of each sum. Show your thinking using drawings, numbers, or words.

a. $31 + 15$ _____

b. $17 + 8$ _____

c. $26 + 17$ _____

9

Exploration

Choose 3 of these 7 cards. Get as close to 20 as you can.

1 3 4 5 7 8 9

a. Can you make 20?

b. Can you make 20 in more than 1 way?

c. Can you make 20 using the number 1 card?

10

Exploration

Clare has the 1, 2, 3, 4, 5, 6, 7, 8, and 9 cards.

She chooses 7 cards. Clare can't make 20 with 3 of her 7 cards.

Which 3 cards do you think she chose? _____

Explain your reasoning.

Section

B

Ways to Represent Data



**I will collect, represent,
and solve problems
involving data in bar
and picture graphs.**

Alignments

Building On
1.MD.C.4, 1.OA.C.5,
1.OA.C.6, 2.MD.D.10

Addressing
2.MD.D.10, 2.OA.B.2

Building Towards
2.MD.D.10, 2.OA.B.2

Mathematical Practice
MP2, MP3, MP4, MP5,
MP6, MP7



Name

Date

Lesson 7

Collect and Represent Data

Let's organize data and share it.





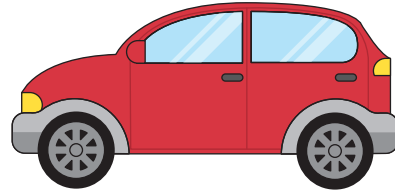
Let's Get There

What do you notice? What do you wonder?

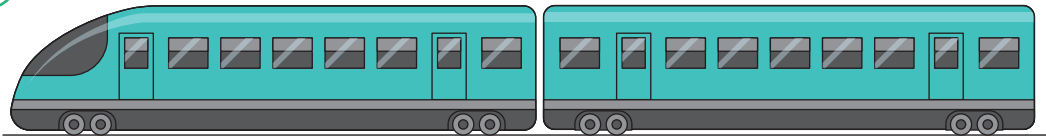
A



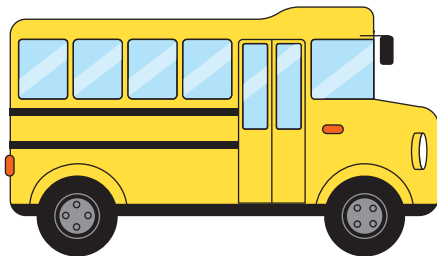
B



C



D

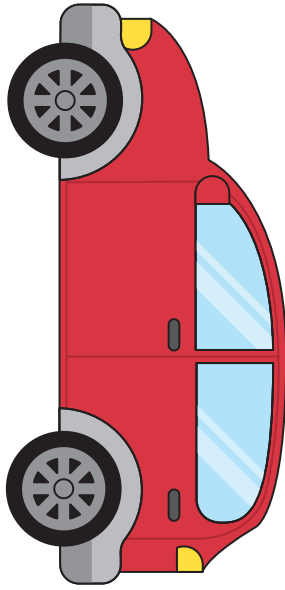


1

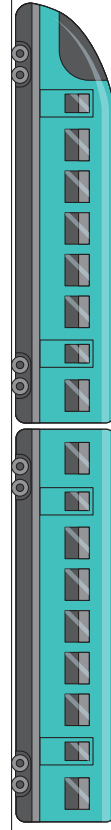
How Do We Get to School?

Write your name on the picture that shows how you get to school.

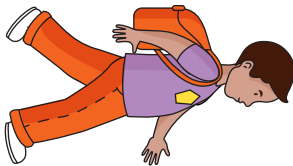
car



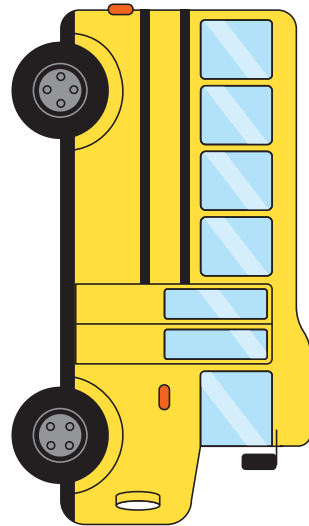
train



walk



bus



2

Visual Representations of Data

Organize and represent class **data**.

Notes

Name

Date

Lesson 8

Interpret Picture Graphs

Let's answer questions about picture graphs.

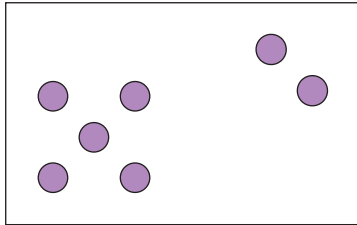




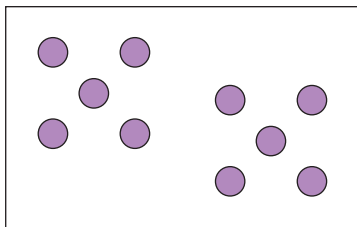
Dots within 10

How many do you see? How do you see them?

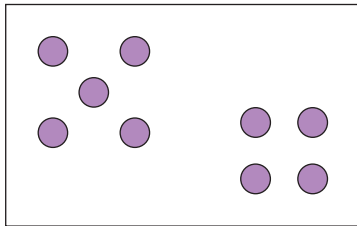
A



B



C

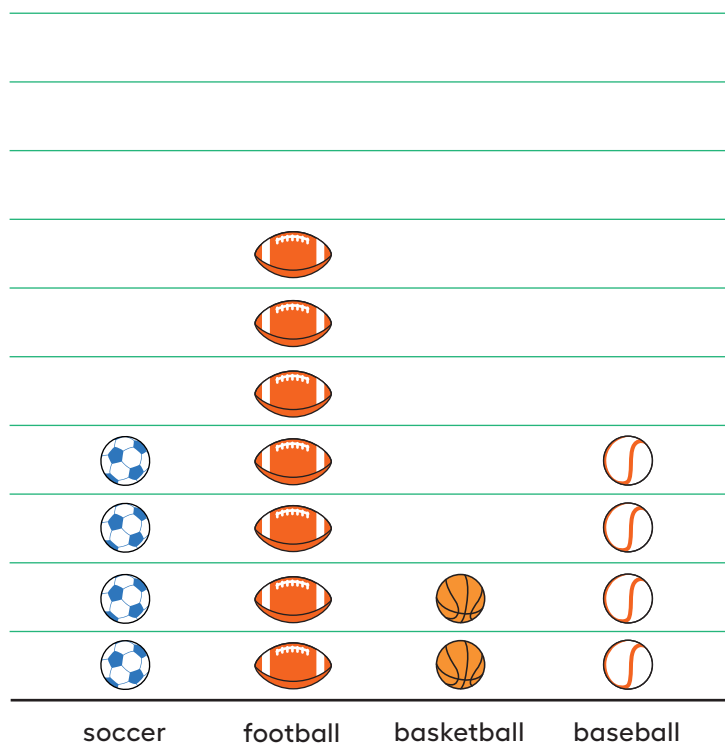


1

Sports People Love

Clare asked a group of children, “What sports do you love?” Their responses are shown in this picture graph.

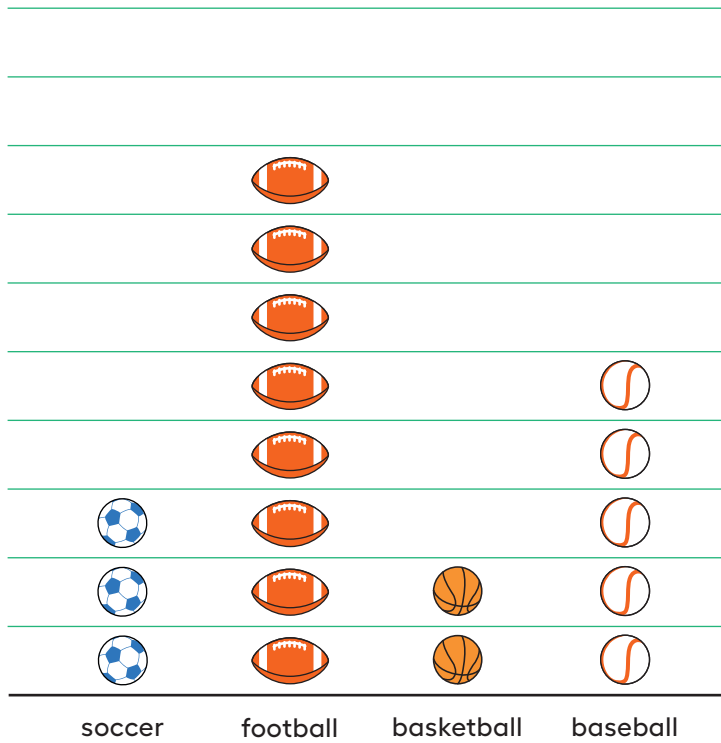
Sports Children Love



What can you learn about the sports children love from Clare’s picture graph?

A group of adults were asked, "What sports do you love?"
 Their responses are shown in this picture graph.

Sports Adults Love



1 How many adults like basketball?

2 How many like football or baseball? Show your thinking using drawings, numbers, or words.

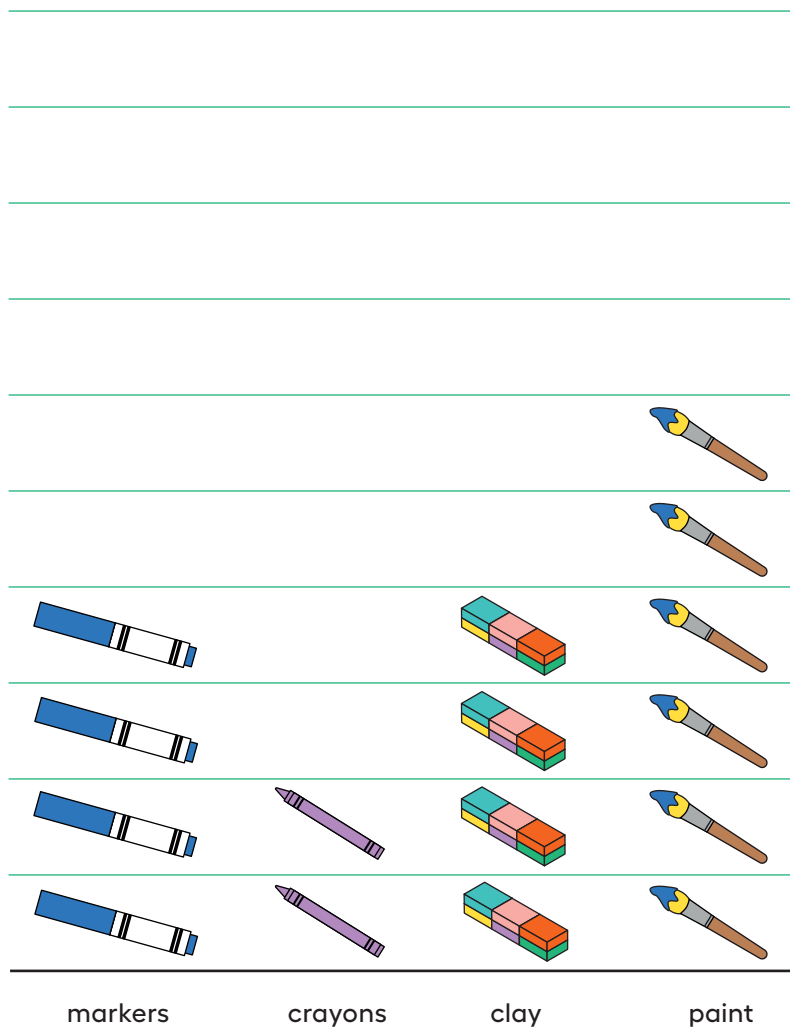
3 Write 1 fact you learned about the data in the picture graph.

2

Answer Questions

A group of children were asked, “What is your favorite art supply?” Their responses are shown in this picture graph.

Favorite Art Supplies



1 Circle the 4 questions the graph can answer.

a. How many children chose markers?

b. How many chose crayons or clay?

c. Why did so many children choose paint?

d. How many more children chose markers than crayons?

e. What is the total number of children who chose paint or markers?

2 Answer each question you circled.

Notes

Lesson

9

Interpret Bar Graphs

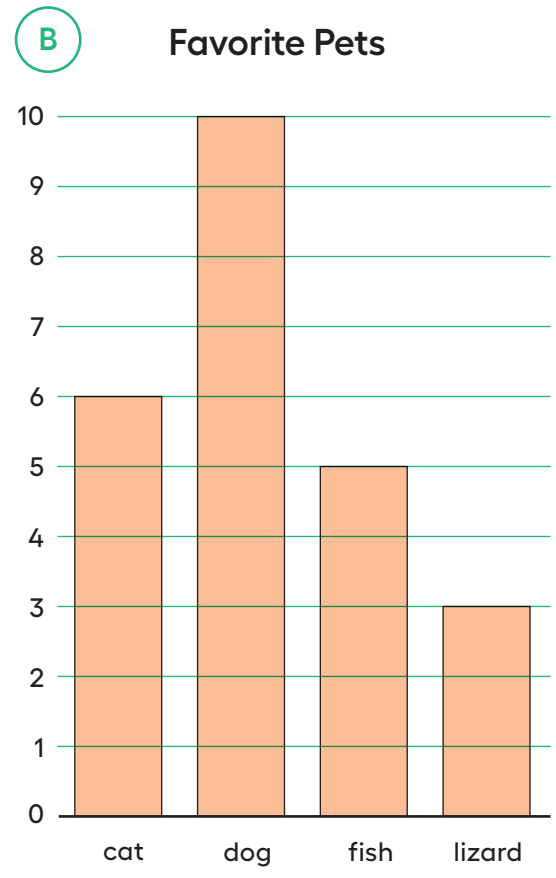
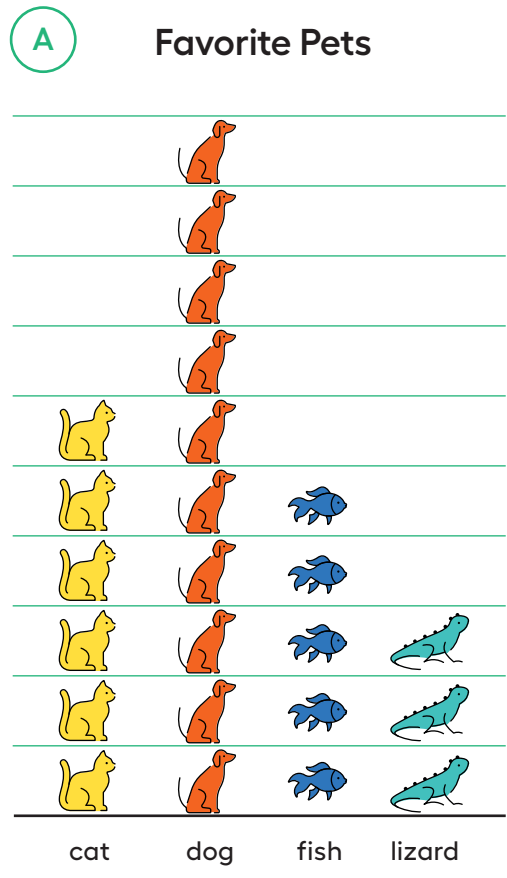
Let's answer bar graph data questions.

WARM-UP

Notice and Wonder

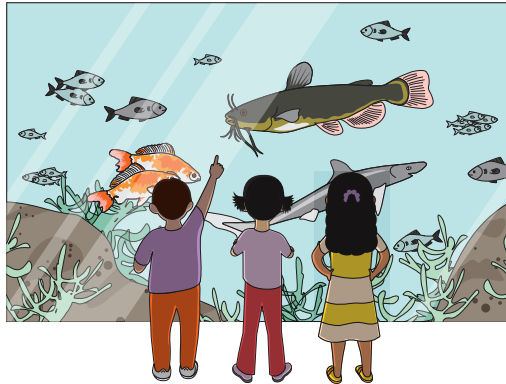
Favorite Pets

What do you notice? What do you wonder?



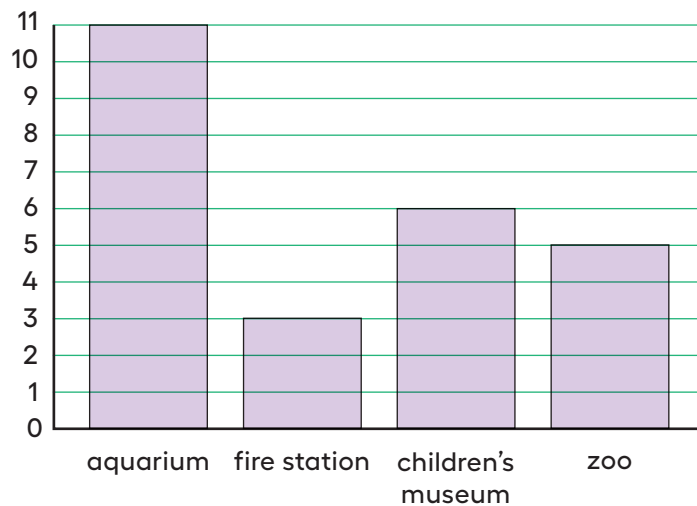
1 Field Trip Choices

Groups of students in different classes were asked, “Where would you like to go on a field trip?” Their responses are shown in these bar graphs.

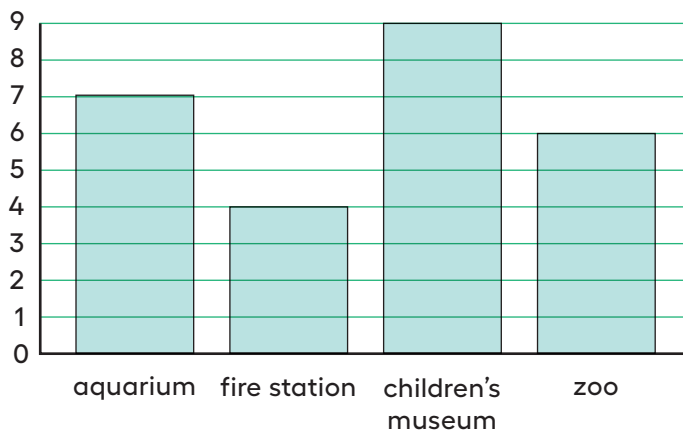


Write as many statements as you can about each bar graph.

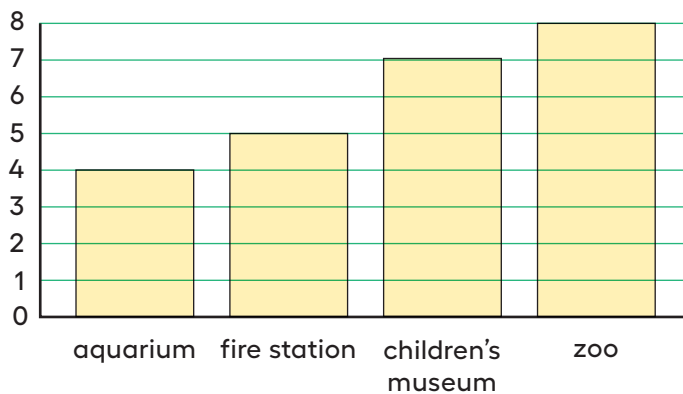
Class 1 Field Trip Choices



Class 2 Field Trip Choices



Class 3 Field Trip Choices



2

Our Favorite Seasons

A group of students were asked, “What is your favorite season?” Their responses are shown in the bar graph.



- 1 How many students voted for summer? _____
- 2 What is the total number of students who voted for fall or spring? _____
- 3 Which 2 seasons have a total of 10 votes?

- 4 How many students voted? _____

Name

Date

Lesson 10

Represent Data Using Picture Graphs and Bar Graphs

Let's make our own bar and picture graphs.

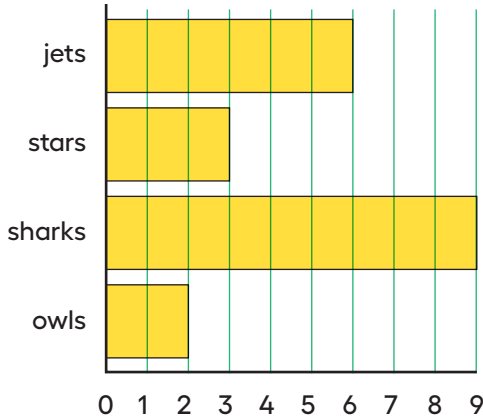




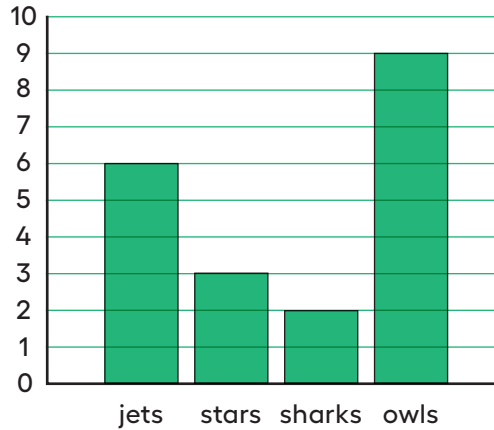
Data

Which 3 go together?

A Team Name Choices



B Team Name Choices



C Team Name Choices

jets	stars	sharks	owls
		sharks	
		sharks	
jets		sharks	
jets		sharks	
jets		sharks	
jets	stars	sharks	
jets	stars	sharks	
jets	stars	sharks	owls
jets	stars	sharks	owls

D

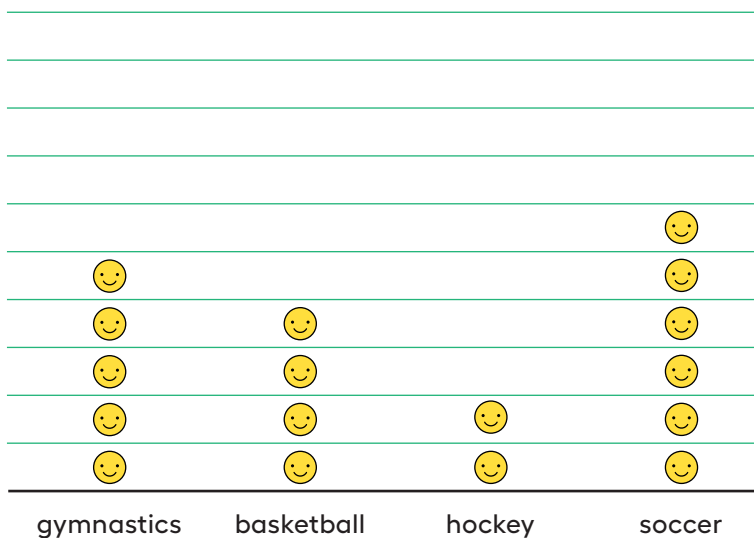
jets	stars	sharks	owls
6	3	9	2

1

Draw Picture Graphs

A group of second graders were asked, “What is your favorite sport?” Their responses are shown in this picture graph.

2nd Graders’ Favorite Sports



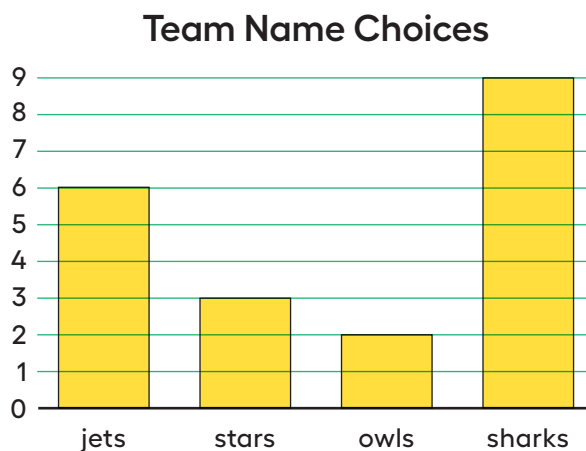
Represent the data shown in your table in a picture graph.

Table # _____

2

Draw Bar Graphs

A group of students were asked, “What is your favorite team name?” Their responses are shown in this bar graph.



Represent the data shown in your table in a bar graph.

Table # _____



Name

Date

Lesson 11

Questions about Data

Let's ask and answer questions about bar graphs and picture graphs.



WARM-UP Number Talk



Make a Ten with 3 Addends

Find the value of each sum mentally.

A $3 + 7$

B $3 + 7 + 2$

C $5 + 7$

D $2 + 4 + 8$

1

Write Questions Based on Graphs

Write 4 questions about the data in your graphs. Make sure you have 2 questions for each graph.

1

2

3

4

Bonus question:

Answer Questions Using Graphs

Answer your partner's questions using the graphs.

1

2

3

4

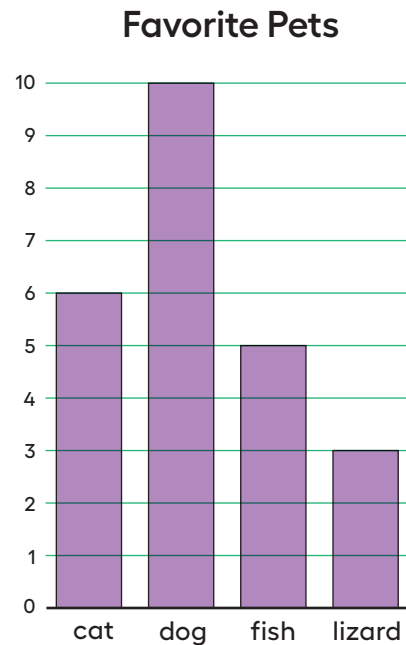
5

How did you find the answers?

B

Summary

We represented data with picture graphs and bar graphs. We used graphs to answer questions. **Data** is a collection of facts, such as numbers, measurements, or observations. We used data to answer questions.



A **picture graph** shows data using pictures or symbols to represent how many are in each group or category.

A **bar graph** shows data about a group or category using the height and length of rectangles.

Answer the questions below.

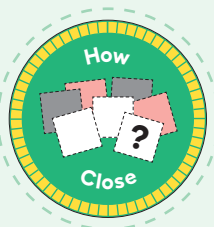
- 1 How many students picked a dog?
- 2 How many more students picked cats than lizards?
- 3 How many students voted?

**Lesson 12**

Name _____

Center Day 2

Let's sort a collection and make graphs about it.

**WARM-UP** Number Talk**Differences**

Find the value of each expression mentally.

A $17 - 7$

B $17 - 9$

C $15 - 5$

D $15 - 8$

Name

Date

SECTION

B

Practice Problems

1

from Unit 1, Lesson 7

Diego records the favorite colors of his classmates.

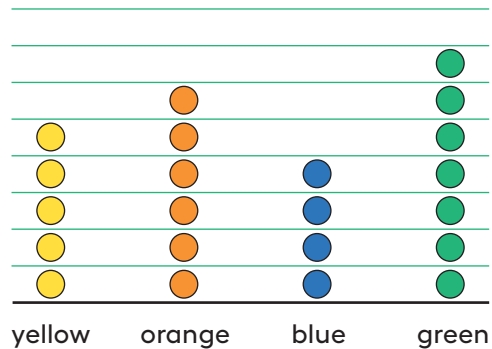
yellow	red	red	blue	red	blue
purple	yellow	red	red	blue	purple
red	blue	blue	yellow	red	red

Create a graph to represent his data.

2

from Unit 1, Lesson 8

Favorite Color

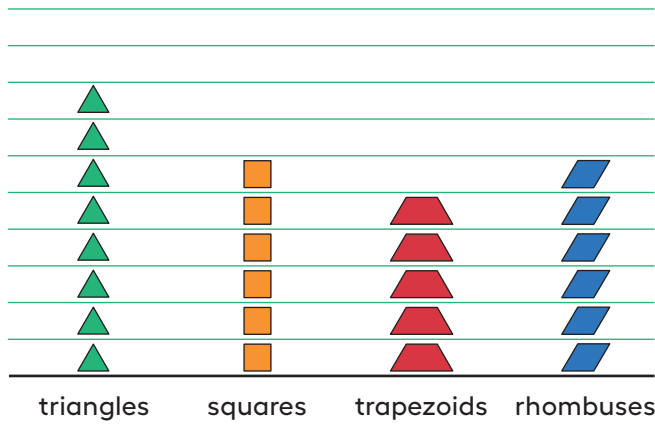


Circle **3** true statements about the data in the graph.

- A More students like green than any of the other colors.
- B 5 students chose blue.
- C 2 more students chose blue than orange.
- D 22 students voted in all.
- E 3 fewer students chose blue than green.

3 from Unit 1, Lesson 8

Pattern Blocks by Shape



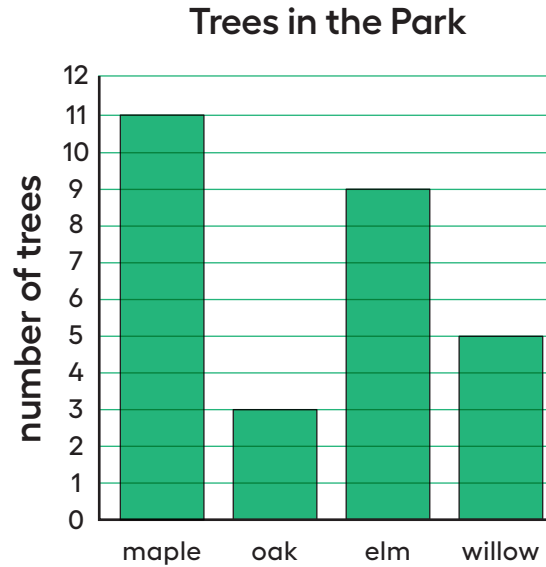
Circle **3** questions the graph answers.

- A Are there more trapezoids than squares?
- B Are all of the triangles together in the pattern?
- C How many hexagons?
- D How many more triangles than rhombuses?
- E How many squares and trapezoids?

4

from Unit 1, Lesson 9

Use the bar graph. Answer questions about the trees in a park.



a. How many trees in all?

b. How many more maple trees than willow trees?

c. Which kind of tree has the fewest number?

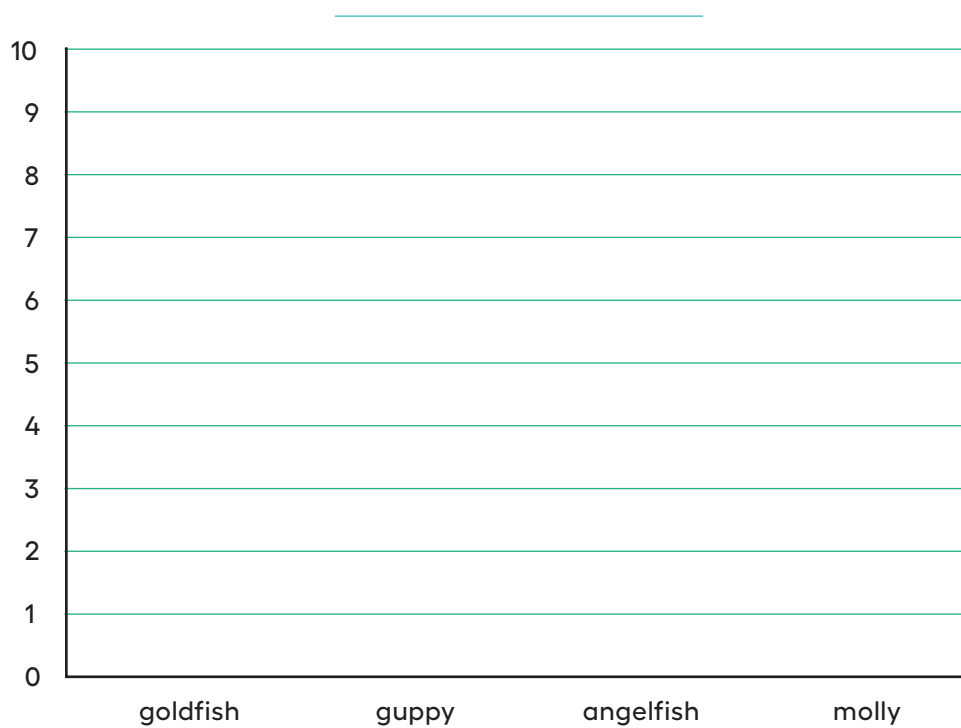
5

from Unit 1, Lesson 10

This table shows the fish in a tank.

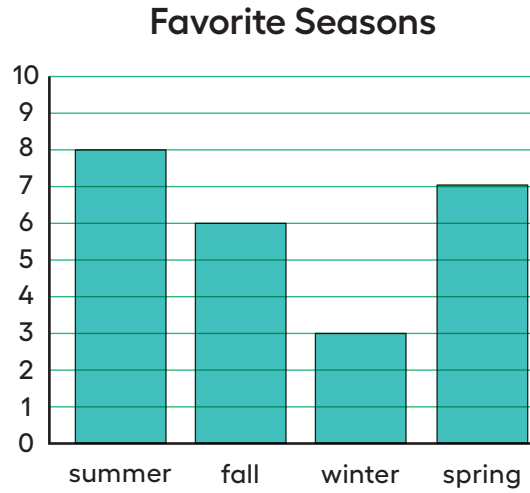
name	number
goldfish	3
guppy	9
angel fish	4
molly	5

Make a bar graph about the table.



6

from Unit 1, Lesson 11



- a. Write 2 questions that you can answer using the graph.

- b. Answer the questions.

7

Exploration

The data shows the kinds of shapes in a bag. It doesn't show how many of each are in the bag.

triangles	squares	circles

Create a set of data about the shapes that makes all of these statements true.

- There are more than 15 shapes but fewer than 25.
- There are 6 more squares than circles.
- There are 7 fewer circles than triangles.

8

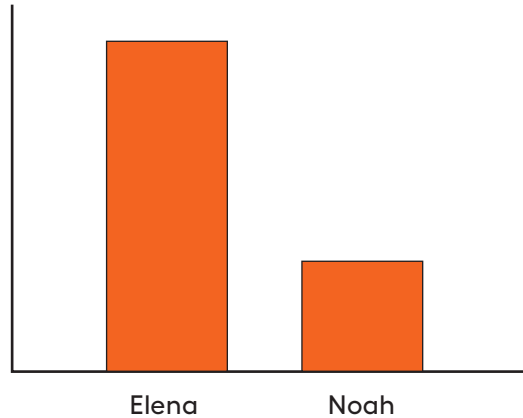
Exploration

- Gather data and make a graph.
- Ask a math question that can be answered with the data.
- Trade with a partner. Answer your partner's questions.

9

Exploration

Han makes this bar graph to show the number of songs Elena and Noah listened to on Saturday.



a. How can Han improve the bar graph?

b. If Noah listened to 7 songs, how many songs did Elena listen to? Explain your reasoning.

Notes

Section



Diagrams to Compare



I will use tape diagrams to represent and solve problems.

Alignments

Building On
2.MD.D.10

Addressing
2.MD.D.10, 2.NBT.A.2,
2.NBT.B.5, 2.OA.A.1,
2.OA.B.2

Building Towards
2.OA.A.1

Mathematical Practice
MP1, MP2, MP4, MP5,
MP6, MP7



Name

Date

Lesson 13

Use Bar Graphs to Compare

Let's use bar graphs to solve Compare problems.



WARM-UP True or False



Make 10 with 9

Decide if each statement is true or false. Be prepared to explain your reasoning.

(A) $9 + 4 = 9 + 1 + 3$

(B) $9 + 4 = 10 + 3$

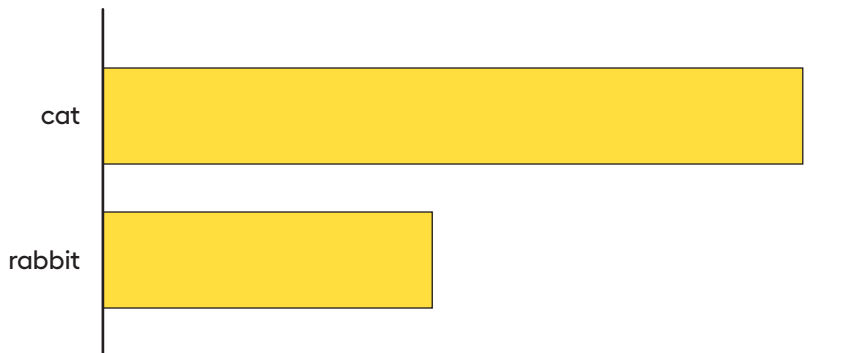
(C) $9 + 5 = 10 + 6$

1

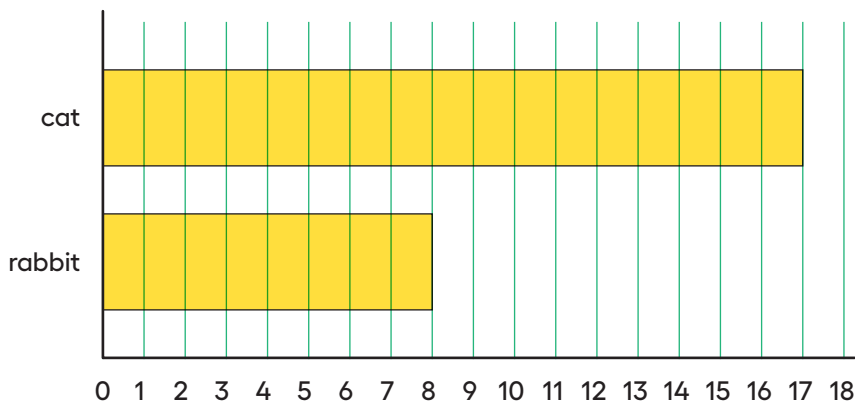
What's the Difference?

What do you notice? What do you wonder?

Third Grade Family Pets



Third Grade Family Pets

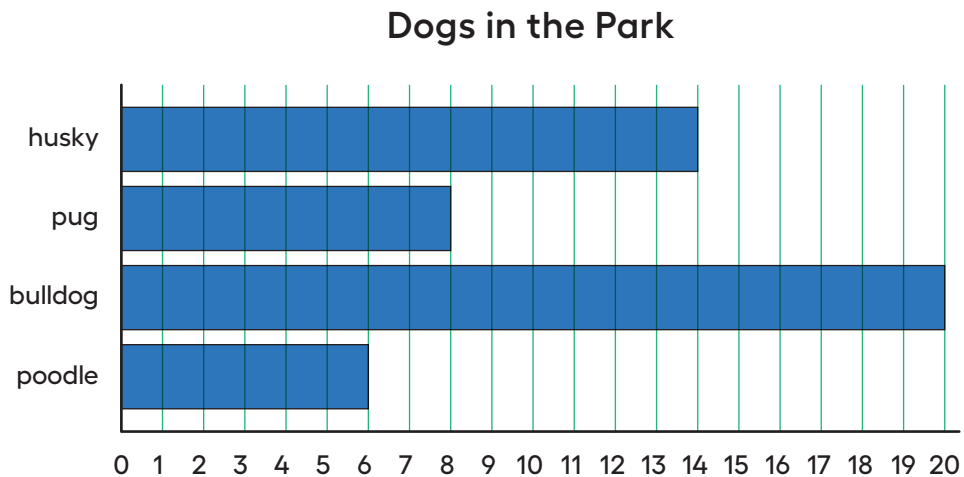


How many more students have cats than rabbits? _____
 Show 2 ways to find the difference.

2

Dogs in the Park

Kiran and Lin counted the types of dogs in a park. Their data is in this bar graph.



- 1 Make this statement true. There are more _____ than _____.
- 2 Write an addition and subtraction equation to show how many more.

- 3 Make this statement true. There are fewer _____ than _____.
- 4 Write an addition and subtraction equation to show how many fewer.

Name

Date

Lesson 14

Use Diagrams to Compare

Let's use bar graphs and diagrams to solve Compare Problems.



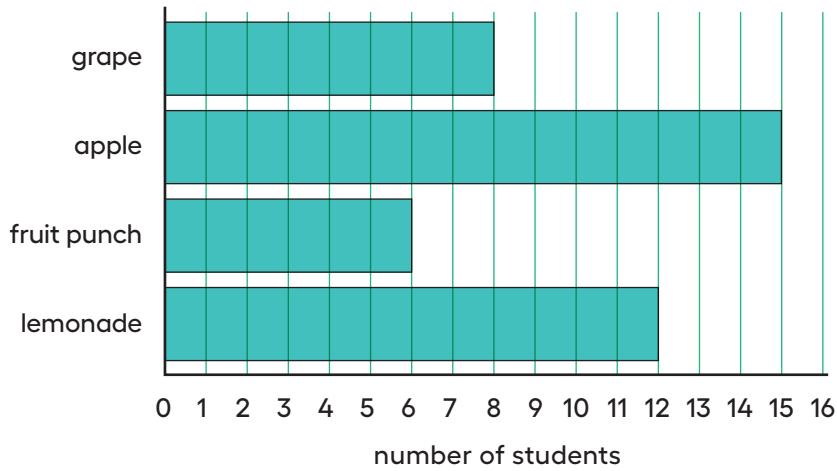


What Kind of Graph Is This?

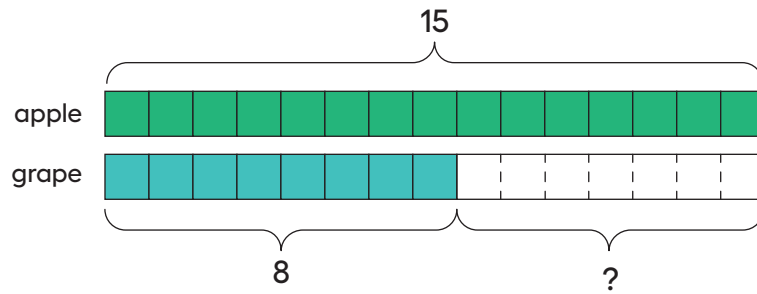
What do you notice? What do you wonder?

A

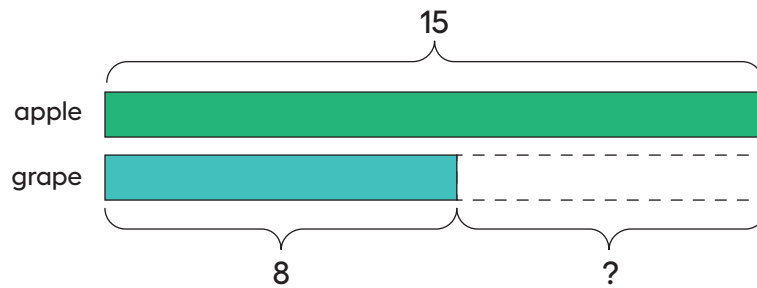
Juice Flavors for the Party



B



C



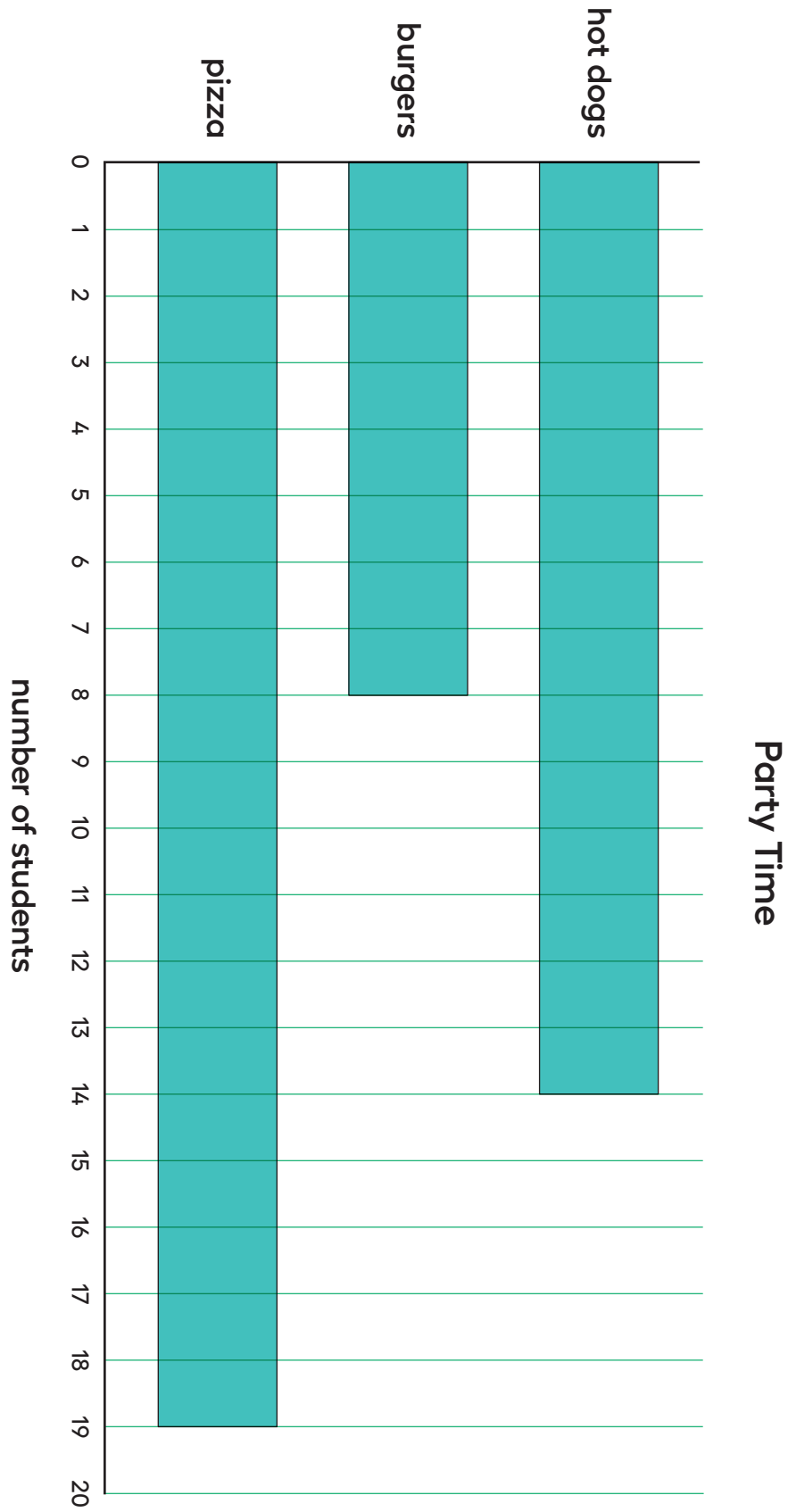
1

Party Time (Part 1)

1 Glue down the 2 bars that compare the number of students who chose hot dogs to the number who chose burgers.

2 Write 2 statements. Compare the number of students who chose hot dogs to the number who chose burgers.

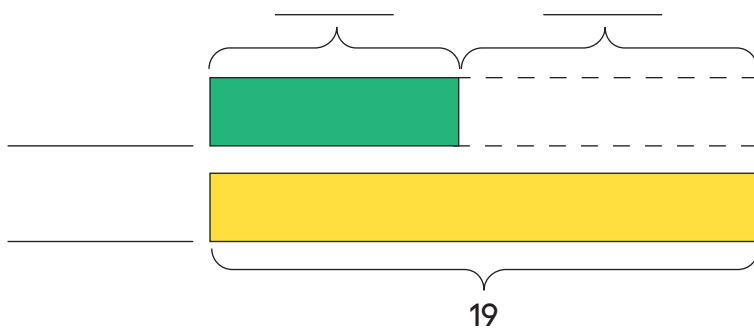
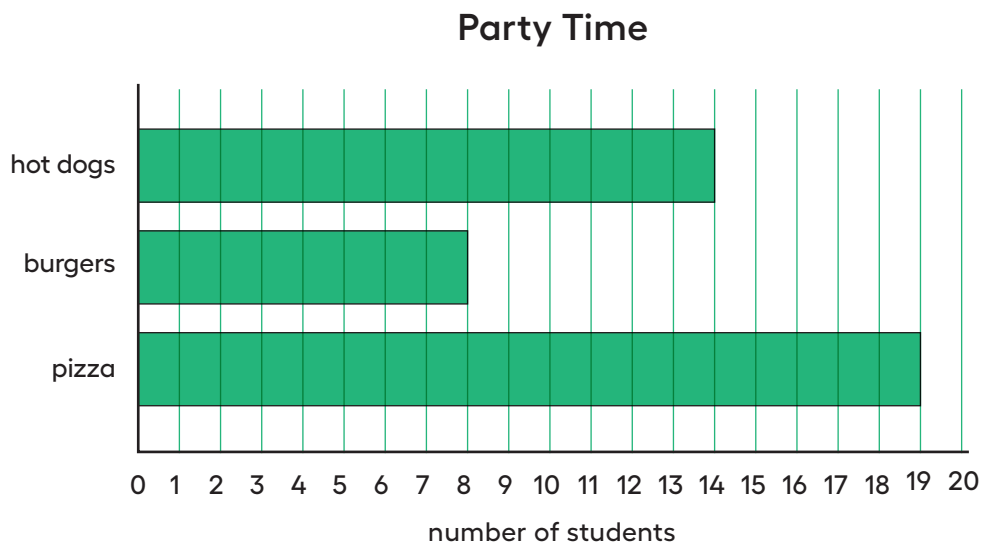
Notes



2

Party Time (Part 2)

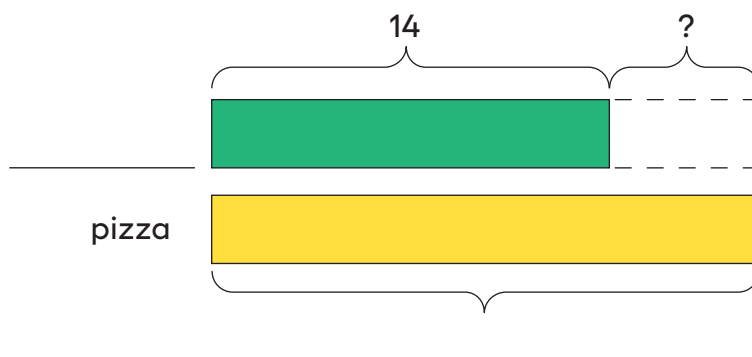
- 1 Use the data from the bar graph to complete the diagram.



- 2 How many more students chose pizza than burgers?

Write an equation to show how you found the difference.

- 3 Use the data from the bar graph to complete the diagram.



- 4 Write a statement. Compare the student votes in the diagram.

Notes

Name

Date

Lesson 15

Diagrams with All Kinds of Compare Problems

Let's connect
Compare problems
to tape diagrams.



WARM-UP Number Talk



10 and Some More

Find the value of each sum mentally.

A $4 + 8 + 2$

B $4 + 5 + 3 + 2$

C $9 + 3 + 1$

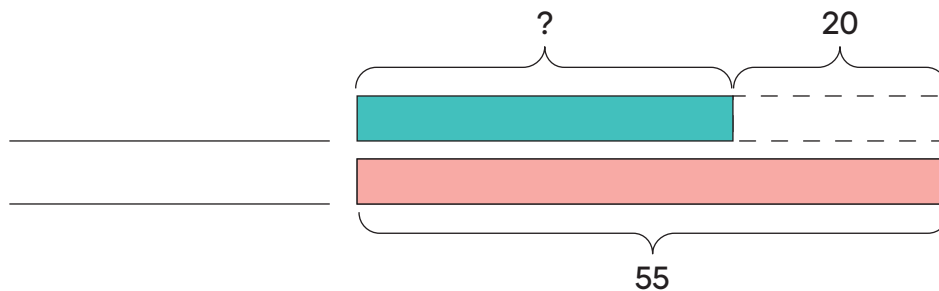
D $9 + 5$

1

Shell Collections

Diego has 55 shells. Lin has 20 fewer shells than Diego.

- 1 Use the story problem to complete the diagram.



- 2 Write an equation to find the unknown number of shells. Use ? to represent the unknown.

2

At the Beach

- 1 Read a story problem card.
- 2 Match each story problem to a diagram and an equation.
- 3 Be prepared to explain your reasoning.

Notes

Name

Date

Lesson 16

Solve All Kinds of Compare Problems

Let's solve Compare problems.



WARM-UP True or False



Multiples of 10

Is each statement true or false? Be prepared to explain your reasoning.

(A) $18 + 5 = 18 + 2 + 3$

(B) $28 + 5 = 30 + 3$

(C) $38 + 4 = 40 + 3$

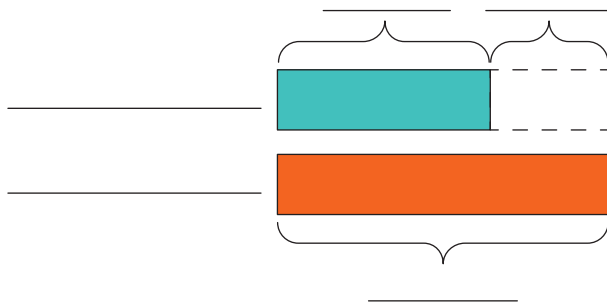
1

A Trip to the Library

1 Priya returns 29 books to the library. Andre returns 8 more than Priya.

a. Who returns more books? _____

b. Use the story problem to fill out the tape diagram.

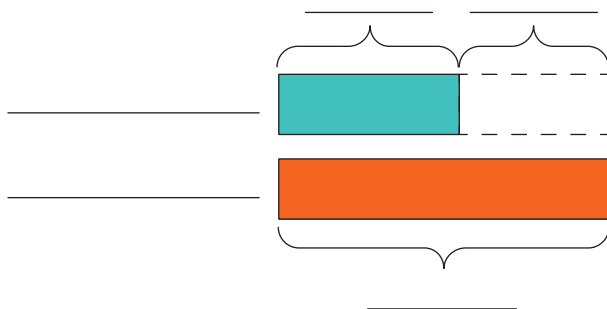


c. How many books does Andre return? _____

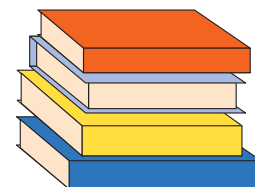
2 Andre reads 45 pages of his book. Priya reads 20 fewer.

a. Who reads more pages? _____

b. Use the story problem to fill out the tape diagram.



c. How many pages does Priya read? _____



2

Solve Compare Problems

- 1 Jada reads 10 fewer pages than Noah. Noah reads 27 pages. How many pages does Jada read? _____

- 2 Noah reads for 25 minutes. Jada reads for 30 more minutes than Noah. How long does Jada read? _____

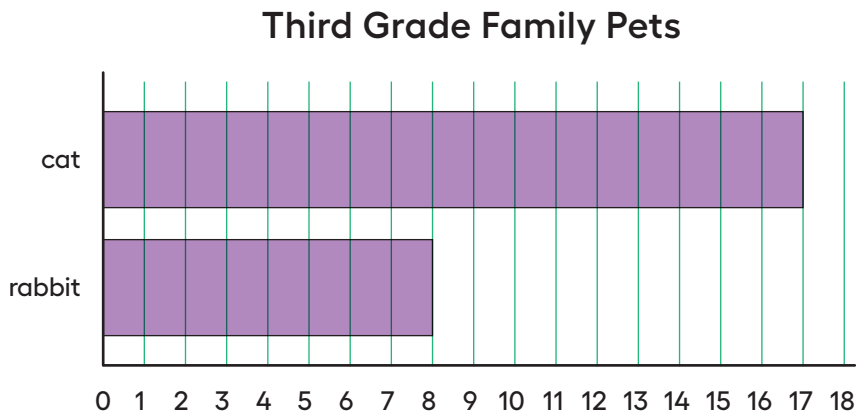
- 3 Jada reads 47 pages. Noah reads 20 pages. How many fewer pages does Noah read? _____

- 4 Noah stacks 14 more books than Jada. Jada stacks 28. How many books does Noah stack? _____

C

Summary

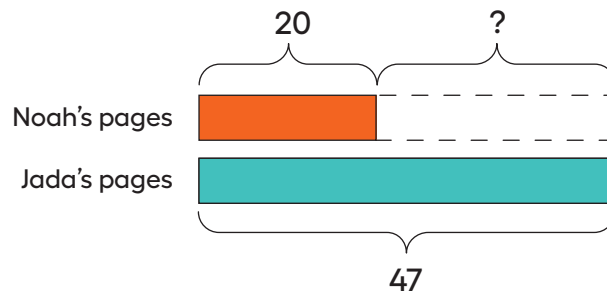
We represented and solved Compare problems. We used bar graphs to find the difference between 2 categories.



How many more students have cats than rabbits?

Show 2 ways to find the difference.

We used diagrams to make sense of story problems. We used the diagrams to show which part of a comparison we need to find.



Jada reads 47 pages. Noah reads 20 pages. How many fewer pages does Noah read?

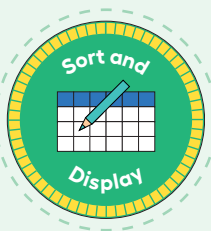
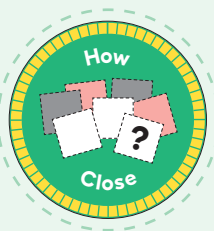
In this problem, we find the difference. We know how many pages Noah and Jada read. The ? represents the difference.

**Lesson 17**

Name _____

Center Day 3

Let's count objects, play addition games, and create graphs.

**WARM-UP** Number Talk**Add 10 More**

Find the value of each sum mentally.

- A** $27 + 10$
- B** $27 + 10 + 10$
- C** $27 + 30$
- D** $37 + 30$

Notes

Name

Date

Lesson 18

Class Surveys

Let's create our own surveys to get to know our classmates.



WARM-UP What Do You Know About ____?



What Do You Know About Bar Graphs?

What do you know about bar graphs?

1

Classroom Survey and Graph

1 What is your survey question?

2 What are your categories?

- Category 1: _____
- Category 2: _____
- Category 3: _____
- Category 4: _____

3 Record the data.

4 Organize and represent the data in a bar or picture graph.

A grid of horizontal lines for drawing a bar or picture graph. The grid consists of 15 horizontal lines. The top line is black, and the remaining 14 lines are green. The lines are spaced evenly down the page.

2

Analyze the Data with Diagrams

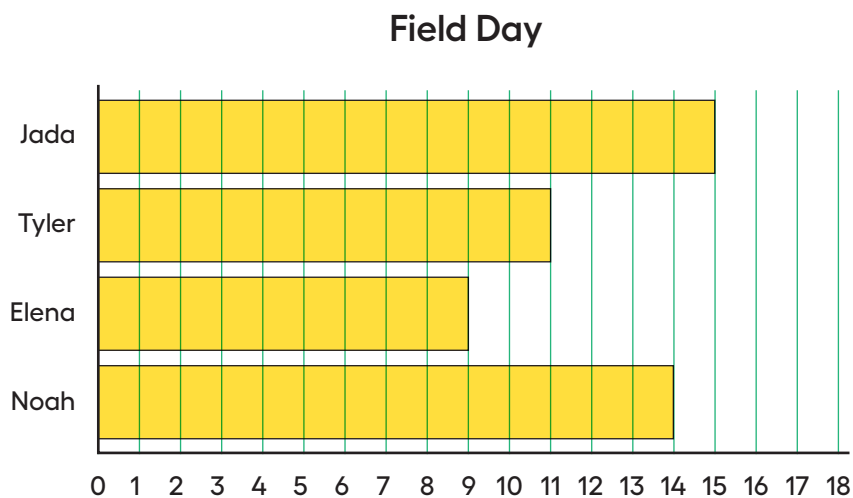
1 Draw a diagram. Your diagram should compare 2 facts you learned from your survey.

2 Write an equation that represents the comparison.

1

from Unit 1, Lesson 13

The graph shows the number of games these students played on field day.



- a. How many fewer games did Elena play than Jada?

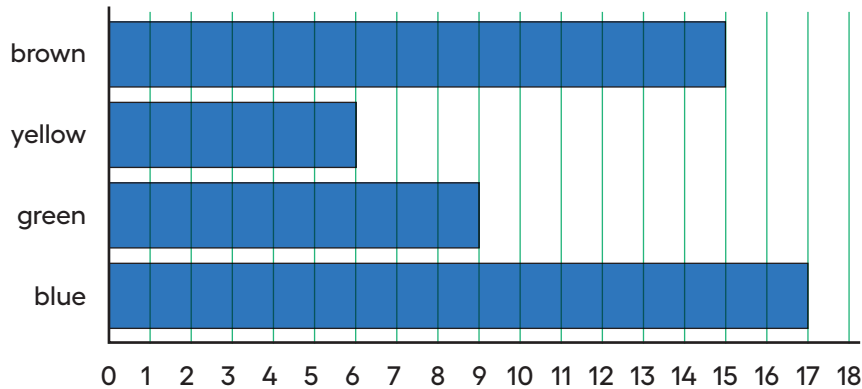
- b. Write an equation to show how you found the difference.

2

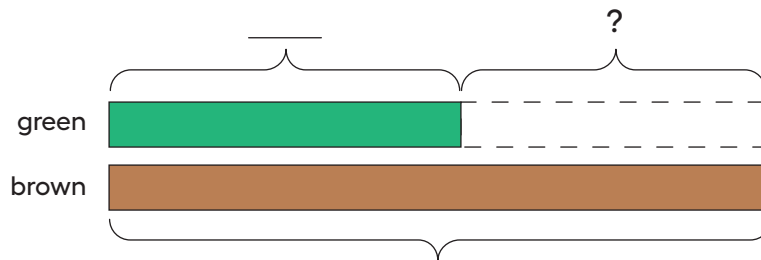
from Unit 1, Lesson 14

The bar graph shows the number of connecting cubes of different colors in a bag.

Connecting Cube Colors



a. Use the bar graph to complete the diagram.



Be prepared to explain your reasoning.

b. How many fewer green connecting cubes than brown connecting cubes are in the bag? Explain your reasoning.

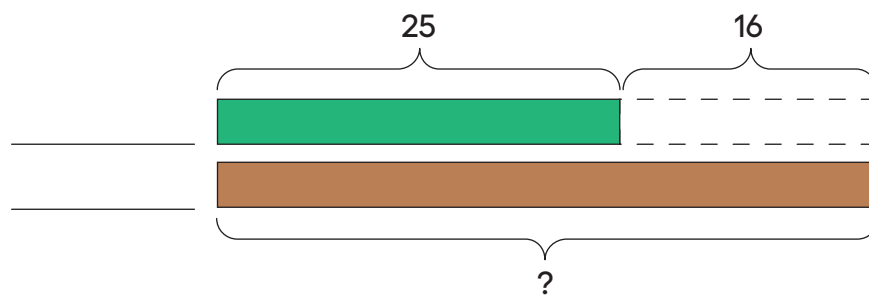
3

from Unit 1, Lesson 15

There are 25 crickets chirping in the front yard.

There are 16 fewer crickets chirping in the front yard than the back yard.

- a. Label the diagram to match the story.
Explain your reasoning.



- b. Write an equation about the story problem.

4

from Unit 1, Lesson 16

There are 35 cherries in a bowl. There are 17 more cherries in the bowl than on a plate. How many cherries are on the plate? Show your thinking using drawings, numbers, or words.

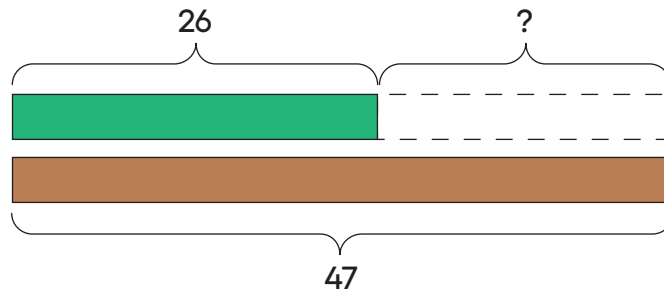
5

from Unit 1, Lesson 16

There are 26 students in the cafeteria. There are 18 more students on the playground than in the cafeteria. How many students are on the playground? Show your thinking using drawings, numbers, or words.

6

Exploration



Write a story to match the diagram. Explain your reasoning.

7

Exploration

Write a Compare story problem.

Solve your problem. Make an equation and a diagram.

bar graph

A way to show data using the height or length of rectangles to represent how many in each group or category.

data

A collection of facts, such as observations, numbers, or measurements.

Examples:

the color of each pencil in a box

the number of pencils sold each day

the length of each pencil in a box

picture graph

A way to show data using pictures or symbols to represent how many in each group or category.

ATTRIBUTIONS

The Common Core State Standards are trademarks of the Common Core State Standards Initiative. © Copyright 2010. National Governors Association Center for Best Practices and Council of Chief State School Officers. All rights reserved.

<http://www.corestandards.org/>

“5 Practices” refers to the 5 Practices for Orchestrating Mathematical Discussions from Smith, M. S., & Stein, M. K. (2011). 5 practices for orchestrating productive mathematics discussions. Reston, VA: National Council of Teachers of Mathematics.

“Notice and Wonder” and “I Notice/I Wonder” are trademarks of the National Council of Teachers of Mathematics, reflecting approaches developed by the Math Forum (<http://www.nctm.org/noticeandwonder/>), and used here with permission.

Images that are not the original work of Illustrative Mathematics or Imagine Learning are in the public domain, are released under a Creative Commons Attribution (CC-BY) license and include an appropriate citation, or are editorial images used under license from a stock photography agency and include an appropriate citation. Images that are the original work of Illustrative Mathematics or Imagine Learning, or creative images used under license from stock image companies, do not include such a citation.

Notes

Notes

Notes

Notes



You are the reason we created Imagine IM.

You're a mathematician. You think about problems, share ideas, learn from mistakes, and get curious about what others are thinking.

Every lesson in Imagine IM is full of opportunities for you to engage in all of these activities!

This is your community, where you can explore, listen to others' reasoning, and connect the mathematics you learn to things you care about.

Lesson by lesson, you'll build confidence—both through familiar routines and by trying out different strategies to solve problems.

Start **exploring** now!

