

Unit 1

Adding, Subtracting, and Working With Data

Essential Questions

- How can you represent data in a way others can understand?
- How can you use counting to help you add and subtract?

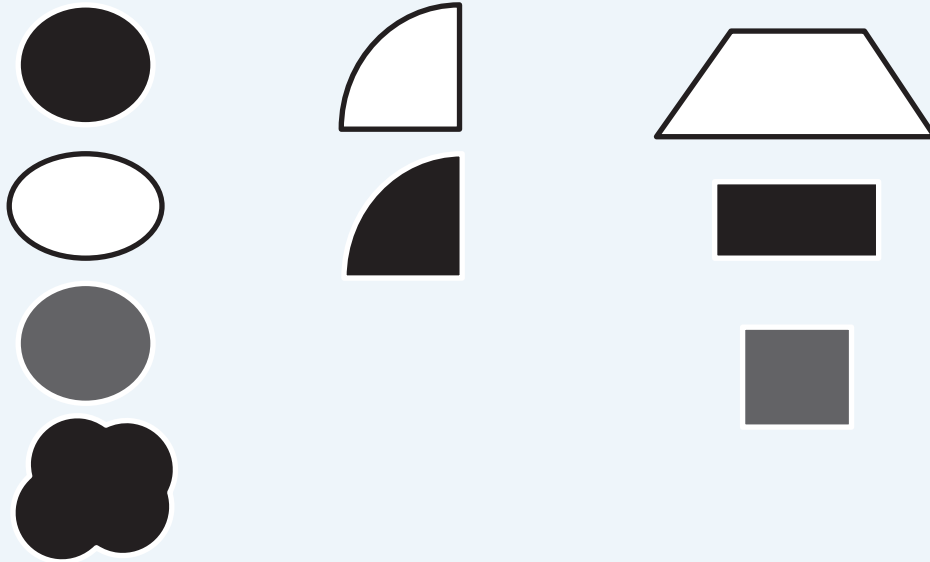


Unit Story: Ying's New Town

In this story, Ying calls her best friend to tell her about the new town she lives in.



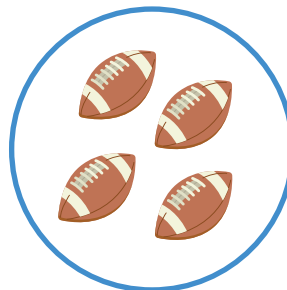
Objects can be organized into **categories** and represented with pictures, symbols, numbers, or words to make information clear for others to understand.



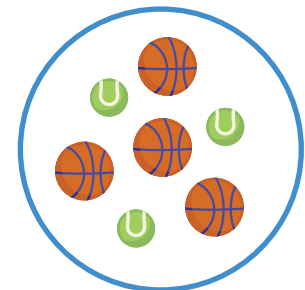
Practice

Jada and Priya sorted their stickers into 2 categories. Use the image for Problems 1 and 2.

- 1 How did they sort the stickers?

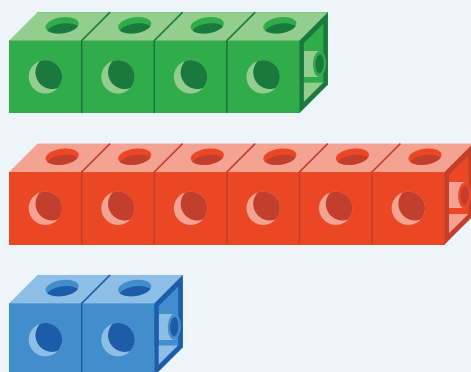


Category 1



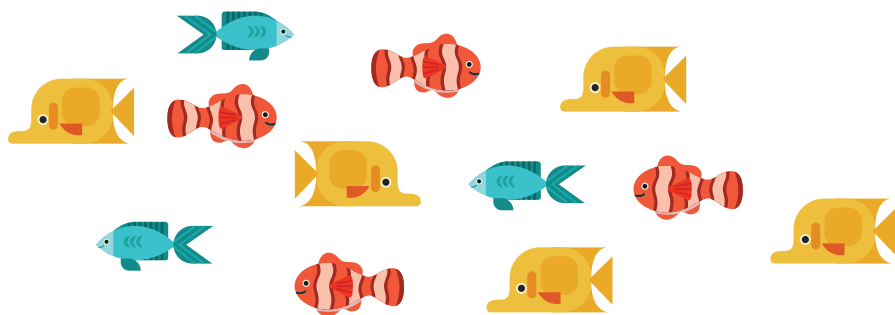
Category 2

Sorting and organizing representations of **data** into straight lines can help you count how many in each category.



Practice

- 1 Jada has some fish stickers.

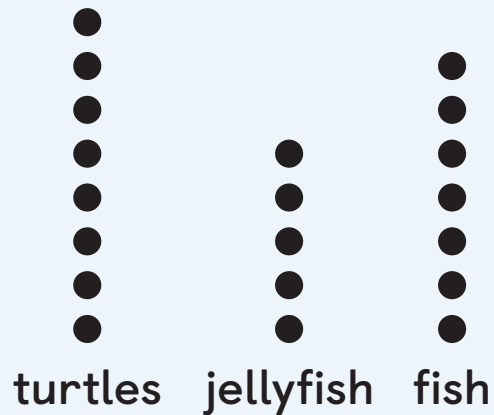


How could Jada sort the stickers into categories?

Jada could sort the stickers by _____.

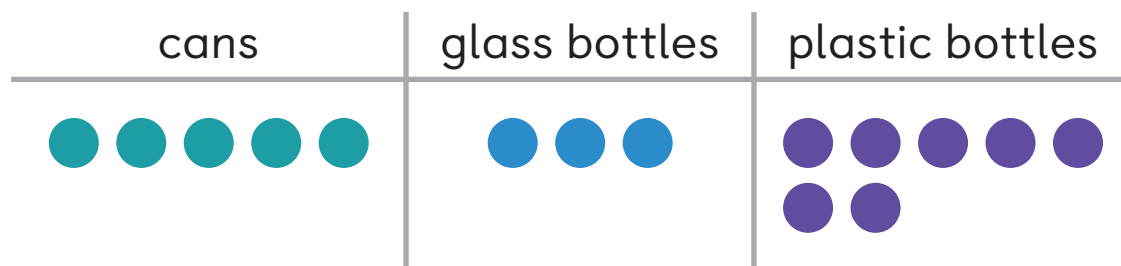
Data can be represented with labels and a title so others can understand the data.

Our Favorite Sea Animals



Practice

Clare sorted some items to recycle.
Use Clare's data representation for Problems 1 and 2.



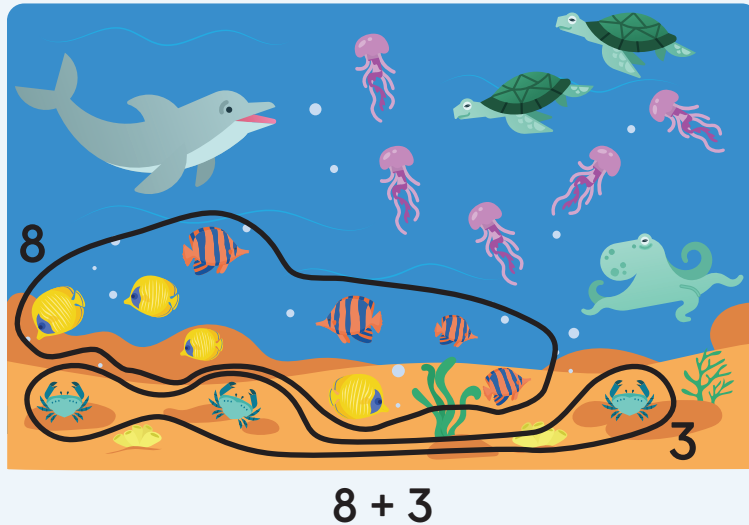
1 How many glass bottles are there?

_____ glass bottles

2 How many cans are there?

_____ cans

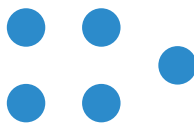
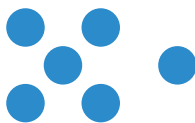
Addition expressions can represent the total amount in 2 groups.



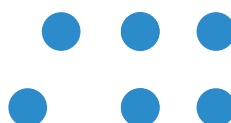
Practice

For Problems 1 and 2, circle the set of dots that matches the expression.

1 $5 + 1$



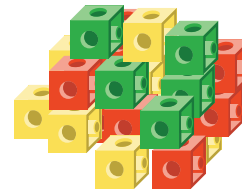
2 $2 + 4$



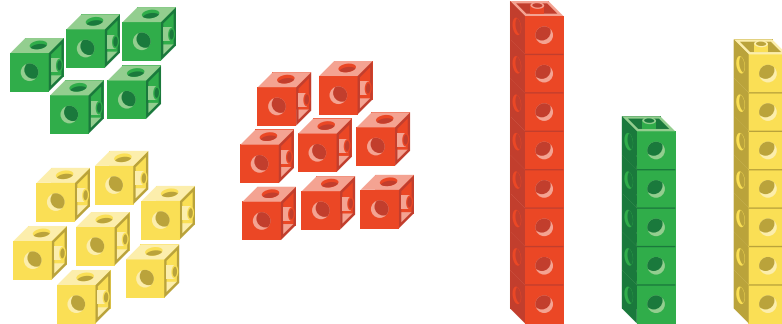
Sub-Unit 1 | Summary

In this sub-unit . . .

- We took a class survey and used connecting cubes to represent the data.



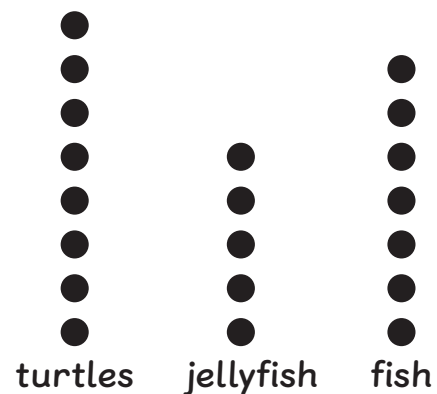
- We organized the data to count how many in each category.



🔥 **Math tip:** Sorting data into categories can help you count how many in each category.

- We represented the data on paper and used labels and a title to help others understand.

Our Favorite Sea Animals



Addition can be represented with story problems, objects, pictures, or expressions.

There are 4 green fish and 4 yellow fish in the aquarium.

How many fish are in the aquarium?

$$4 + 4$$



Practice

Use the story for Problems 1 and 2.

There are 2 red crabs and 8 brown crabs.

1 How many crabs are there?

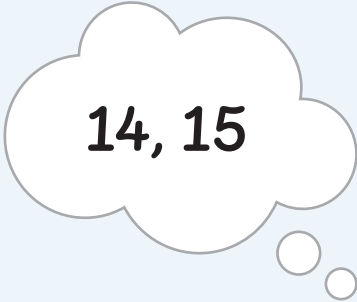
answer: _____ crabs

2 Write an addition expression to match the story.

expression: _____

You can count 1 more to add 1 to a number.

$$14 + 1$$



14, 15

Practice

Find the sum.

1 $9 + 1$ _____

2 $8 + 1$ _____

3 $7 + 1$ _____

4 $6 + 1$ _____

Making connections between counting and adding can help you add 2 to a number.

$$7 + 2$$

7, 8, 9

$$7 + 1 = 8$$

$$8 + 1 = 9$$

Practice

Find the sum.

1 $3 + 1$ _____

2 $3 + 2$ _____

3 $5 + 1$ _____

4 $5 + 2$ _____

An equation is true if the values on both sides of the equal sign are **equal**. Numbers or expressions could be on 1 or both sides of an equation.

$$4 + 6 = 1 + 9$$



Practice

Circle to show if the equation is *true* or *false*.

 Show your thinking.

1 $10 = 5 + 5$



2 $8 + 2 = 6$



Subtraction can be represented with stories, objects, pictures, and expressions.

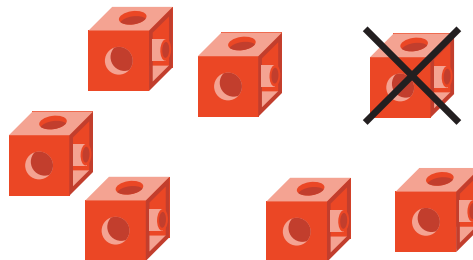


Ying packed 5 apples for the picnic.
She gave 2 apples to a friend.
How many apples are left?

$$5 - 2$$

Practice

Use Shawn's representation.



- 1 Write a subtraction expression for Shawn's representation.

expression: _____

Summary | 1.11

You can count back 1 to subtract 1 from a number.

$$15 - 1$$



Practice

Find the difference.

1 $9 - 1$ _____

2 $6 - 1$ _____

3 $4 - 1$ _____

4 $5 - 1$ _____

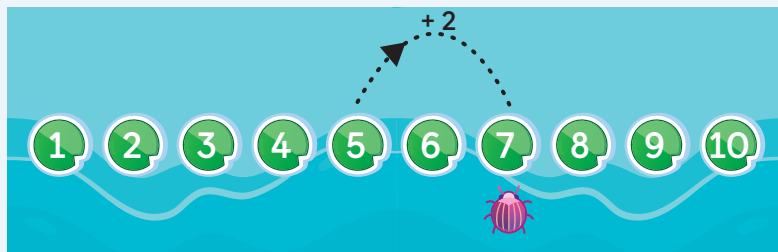
Summary | 1.12

You can use what you know about counting to subtract 2 or add 2.

$$5 - 2 = \underline{3}$$



$$5 + 2 = \underline{7}$$



Practice

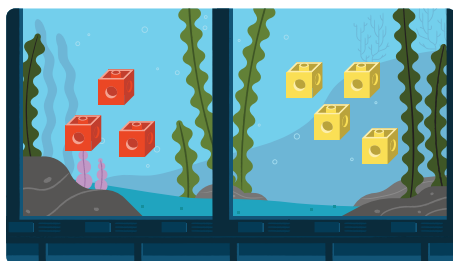
Find the difference.

1 $8 - 1 = \underline{\quad}$

2 $8 - 2 = \underline{\quad}$

In this sub-unit . . .

- We represented addition and subtraction stories with cubes and wrote expressions to match.

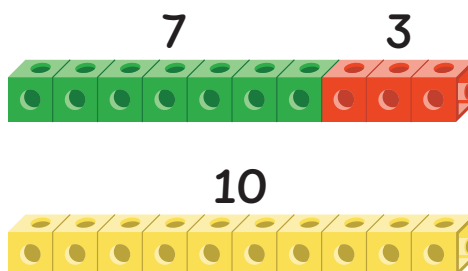


$$3 + 4$$



$$5 - 2$$

- We related counting to adding and subtracting 1 and 2.
 - $3 - 2$ I notice that $3 - 2$ is the same as counting back 2 from 3.
 - 🔥 **Math tip:** You can use what you know about adding 1 and subtracting 1 to add and subtract 2.
- We explained if equations were true or false.
 - $7 + 3 = 10$ This equation is true because 7 plus 3 more is 10. So, $7 + 3$ and 10 have the same value.



Finding a sum can be helpful when describing the total in 2 or more categories of data.

Ying's Rides at the Fair

Ferris wheel	carousel	bumper cars
 		

How many times did Ying ride the carousel and the bumper cars?

$$4 + 1 = 5$$

Practice

Jada surveyed her friends about their favorite fruits.

Votes for Favorite Fruit

blueberries	apples	peaches
 		

- 1 Write an equation to represent the number of votes for apples and peaches.

equation: _____

You can be sure a statement about data is true if the information is included in the data representation.

Kids' Butter Sculpture Votes

cow	house	goat
 		

I do not know if this is true because the chart does not show how many kids came to the fair.

Some kids that came to the fair did not vote.

Practice

Diego collected data about the number of different animals he saw at the fair.

Animals Diego Saw at the Fair

cow	goat	pig
		

Circle to show if the statement is *true* or *false*.




- Diego saw 5 pigs at the fair.



Summary | 1.15

There are many questions you can ask about data. Sometimes, you need to collect more data to answer a question.

Ying's Rides at the Fair

Ferris wheel	carousel	bumper cars
		

How many times did Ying ride the Ferris wheel?

5 times




Why did Ying ride the Ferris wheel the most times?

I need more information.

Practice

Clare made a tally chart to show how many times she went on different rides at the fair.

Clare's Rides at the Fair

Ferris wheel	carousel	bumper cars
		

Circle to show if the question can be answered using the data.

1 Which ride is *not* Clare's favorite?



In this sub-unit . . .

- We decided if statements about data were *true* or *false*.

Butter Sculpture Votes		
cow	house	goat
	 	

The house sculpture got 6 votes.



- We described 2 categories of data with addition equations.

Ying's Rides at the Fair		
Ferris wheel	carousel	bumper cars
 		

$5 = 4 + 1$

- We answered questions about data and noticed when a question could not be answered.
 - Why are most people excited about new friends?
This question cannot be answered because we did not collect information about why people are excited.
 - 🔥 **Math tip:** Sometimes, you need to collect more data to answer a question.