



Core Knowledge[®] MATHEMATICS

Adding Within 100



Student Workbook



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Adding Within 100 **Student Workbook**

Core Knowledge Mathematics™

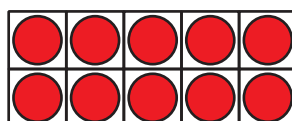
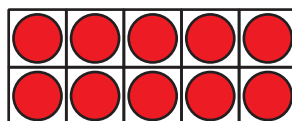
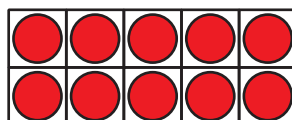
Lesson 1: Add Tens or Ones

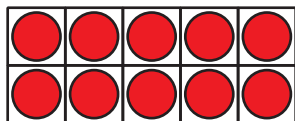
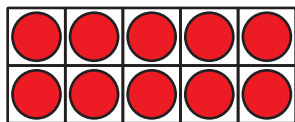
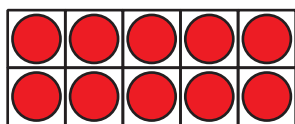
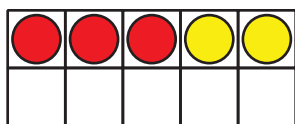
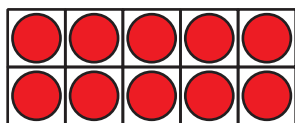
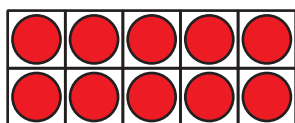
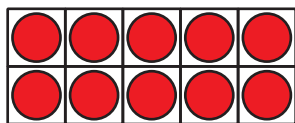
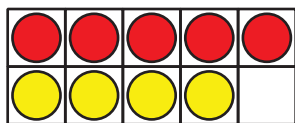
- Let's add tens or ones to two-digit numbers.

Warm-up: How Many Do You See: 10-frames

How many do you see?

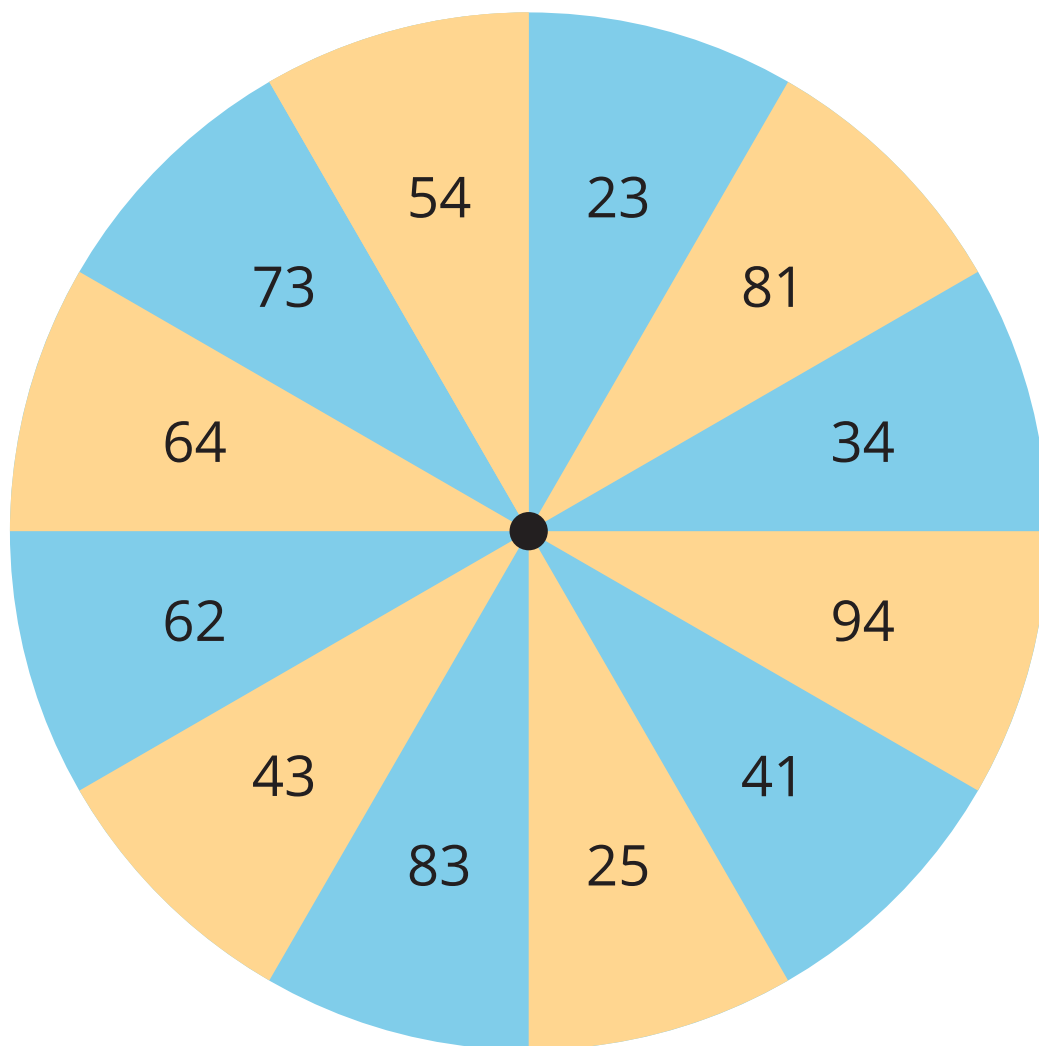
How do you see them?





1.1: What Did I Add?

- Partner A: Spin to get a starting number.



- Partner B: Pick a number card without showing your partner. Choose whether to add that many ones or tens to your starting number. Make sure you don't go over 100. Tell your partner the sum.
- Partner A: Tell your partner what number you think they added and explain your thinking.
- Switch roles and repeat.

1.2: Add Tens or Ones

Find the number that makes each equation true.

1. a. $43 + 5 =$

b. $43 + 50 =$

2. a. $51 + 3 =$

b. $51 + 30 =$

3. a. $2 + 75 =$

b. $20 + 75 =$

4. $93 + 6 =$

Show your thinking using drawings, numbers, or words.

$$5. 60 + 28 = \square$$

Show your thinking using drawings, numbers, or words.

$$6. 5 + 74 = \square$$

Show your thinking using drawings, numbers, or words.

Lesson 2: How Did You Add?

- Let's add numbers and find matching equations.

2.1: Find the Value

Find the value of $23 + 45$.

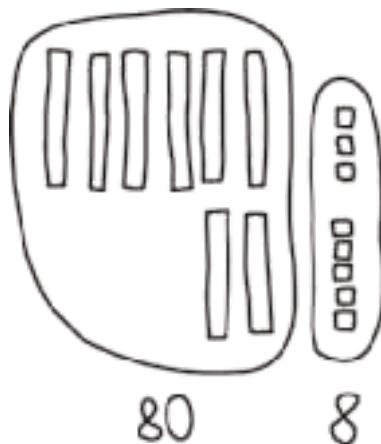
Show your thinking using drawings, numbers, or words.



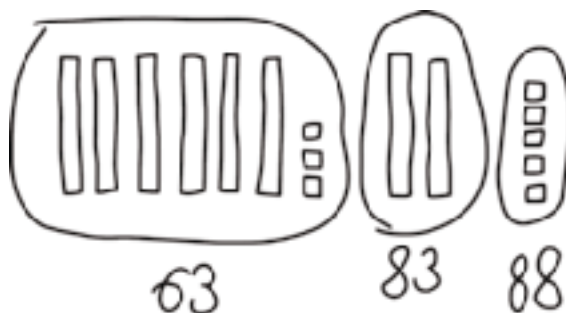
2.2: Elena and Andre Represent $63 + 25$

1. Here are 2 drawings students made for $63 + 25$.

Elena's work



Andre's work



Which equations go with which drawing?

Be ready to explain your thinking in a way others will understand.

Set A

$$63 + 20 = 83$$

$$83 + 5 = 88$$

Set B

$$60 + 20 = 80$$

$$3 + 5 = 8$$

$$80 + 8 = 88$$

Lesson 3: Add It, Explain It

- Let's add numbers and write equations to show our work.

Warm-up: Number Talk: Add More Tens

Find the value of each expression mentally.

- $13 + 21$

- $13 + 31$

- $23 + 31$

- $33 + 41$

3.1: Lin and Han Add

Lin and Han are both finding the value of $32 + 54$.

Look at how each student started.

What should they do next to find the value?

Write equations to represent your thinking.

Be ready to explain your thinking in a way that others will understand.

1. Lin started by putting 3 tens and 5 tens together.
She recorded her first step like this: $30 + 50 = 80$.

2. Han started with 54 and added 3 tens.
He recorded his first step like this: $54 + 30 = 84$.

3.2: I Heard You Say

Find the value of $23 + 74$ using Lin's or Han's method.
Write equations to represent your thinking.

$$23 + 74$$



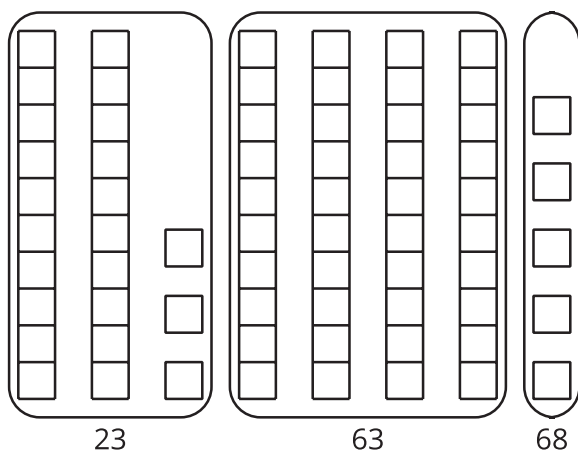
Section Summary

Section Summary

We added numbers within 100. We learned different methods to add by thinking about tens and ones and record our thinking with equations.

$$23 + 45$$

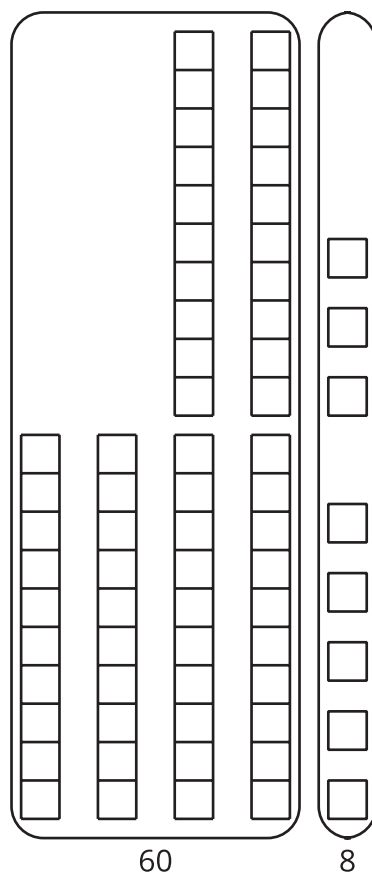
Add on tens then ones:



$$23 + 40 = 63$$

$$63 + 5 = 68$$

Add tens and tens and ones and ones:



$$20 + 40 = 60$$

$$3 + 5 = 8$$

$$60 + 8 = 68$$

Lesson 4: Center Day 1

- Let's add within 100.

Warm-up: Notice and Wonder: Marbles

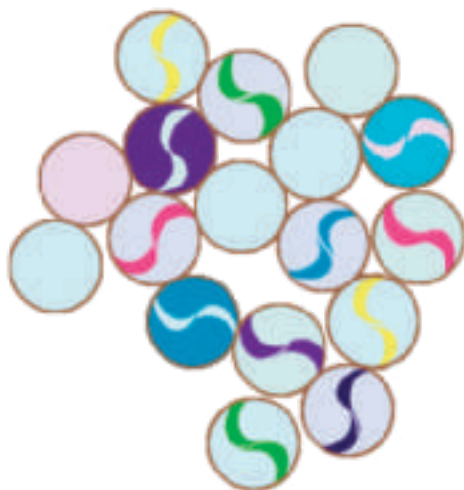
What do you notice?

What do you wonder?

Kiran and Priya each have some marbles.

Kiran has 14 marbles.

Priya has 23 marbles.



4.2: Centers: Choice Time

Choose a center.

Number Puzzles

$$14 = 8 + \square$$

Five in a Row



Greatest of Them All



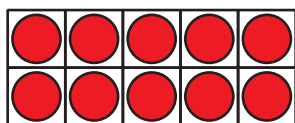
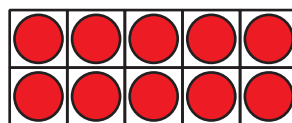
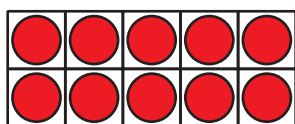
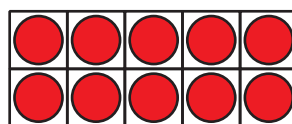
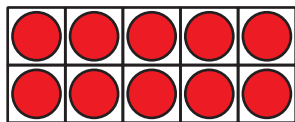
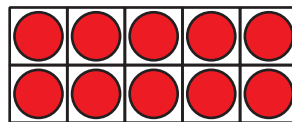
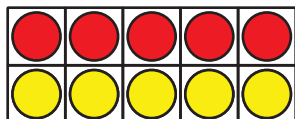
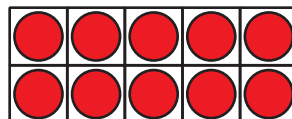
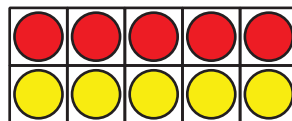
Lesson 5: Make a Ten

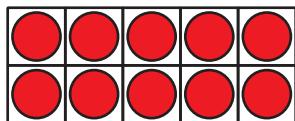
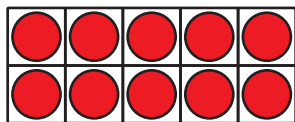
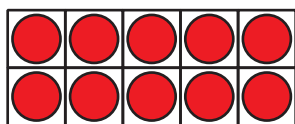
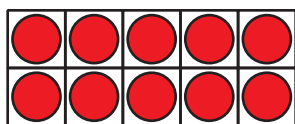
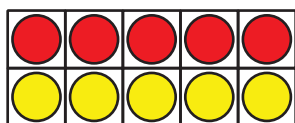
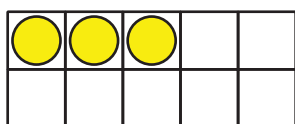
- Let's add two-digit and one-digit numbers.

Warm-up: How Many Do You See: Many 10-frames

How many do you see?

How do you see them?





5.1: Choose a Way to Add

Find the value of $8 + 47$.

Show your thinking using drawings, numbers, or words.

5.2: Add 'Em Up Partner

Practice Round:

Show your thinking using drawings, numbers, or words.

Equation: _____



Round 1:

Show your thinking using drawings, numbers, or words.

Equation: _____

Round 2:

Show your thinking using drawings, numbers, or words.

Equation: _____

Round 3:

Show your thinking using drawings, numbers, or words.

Equation: _____

Round 4:

Show your thinking using drawings, numbers, or words.

Equation: _____

Round 5:

Show your thinking using drawings, numbers, or words.

Equation: _____

5.3: Tyler's Teacher

1. Tyler's teacher collected 37 dollars for the class field trip.

Then someone brought in 7 more dollars.

How much money did Tyler's teacher collect?

Show your thinking using drawings, numbers, or words.

2. Tyler's teacher needs to know if all of his students are in the classroom.

There are 8 students sitting at tables and 26 students on the rug.

How many students are in the classroom?

Show your thinking using drawings, numbers, or words.

Lesson 6: Make a Ten and Make Sense of Equations

- Let's add one-digit and two-digit numbers and make sense of equations.

Warm-up: Number Talk: Add Within 20

Find the value of each expression mentally.

- $8 + 2$

- $8 + 5$

- $9 + 8$

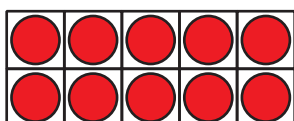
- $7 + 6$

6.1: How Many to the Next Ten?

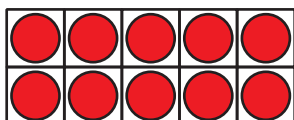
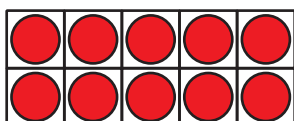
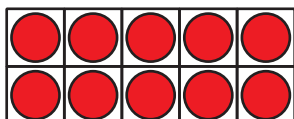
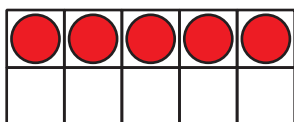
Find the number that makes each equation true.

Be ready to explain your thinking in a way that others will understand.

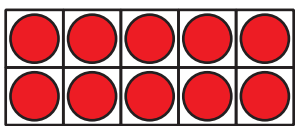
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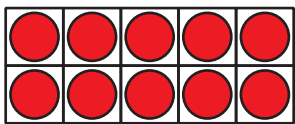
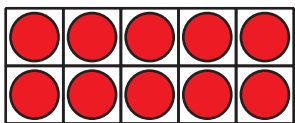
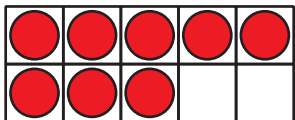
$$45 + \boxed{} = 50$$



2.



$$38 + \square = 40$$



$$3. 63 + \square = 70$$

$$4. 24 + \square = 30$$

$$5.42 + \square = 50$$

$$6.57 + \square = 60$$

$$7.71 + \square = 80$$

$$8.89 + \square = 90$$

9. What did you notice about the unknown number in each equation?

6.2: Elena and Andre Add

Elena and Andre found the value of $34 + 9$.

1. Elena started with $34 + 6 = 40$.

What does Elena need to do next?

Show your thinking using drawings, numbers, or words.

2. Andre started with $9 + 1 = 10$.

What does Andre need to do next?

Show your thinking with drawings, numbers, or words.

3. Find the value of $6 + 68$. Show your thinking using drawings, numbers, or words.

Lesson 7: Does it Make a New Ten?

- Let's add one-digit and two-digit numbers and write equations.

Warm-up: Which One Doesn't Belong: Expressions

Which one doesn't belong?

A

$$7 + 9$$

B

$$22 + 5$$

C

$$32 + 8$$

D

$$44 + 8$$

7.1: A Ten or Not a Ten?

Jada likes to look for ways to make a new ten when she adds. Would she be able to make a new ten when she adds to find the value of these sums?

If Jada could make a new ten, circle "Yes."

If Jada could not make a new ten, circle "No."

1. Does the expression make a new ten?

$$45 + 5$$

Yes No



Explain how you know.

Find the value.

Write equations to show how you found the value of the sum.

2. Does the expression make a new ten?

$$9 + 63$$

Yes No



Explain how you know.

Find the value.

Write equations to show how you found the value of the sum.

3. Does the expression make a new ten?

$$26 + 3$$

Yes No



Explain how you know.

Find the value.

Write equations to show how you found the value of the sum.

4. Does the expression make a new ten?

$$8 + 47$$

Yes No



Explain how you know.

Find the value.

Write equations to show how you found the value of the sum.

7.2: Missing Numbers

Lin's brother spilled water on her math work!

Figure out what number Lin wrote before it got smudged.

1. Lin wrote a one-digit number with which you *can* make a new ten when you find the value of the sum.

$$32 + \text{smudge}$$

What could Lin's number be?

Write equations to show your thinking.

2. Lin wrote a one-digit number with which you *can not* make a new ten when you find the value of the sum.

$$16 + \text{smudge}$$

What could Lin's number be?

Write equations to show your thinking.

3. Lin wrote a two-digit number with which you *can* make a new ten when you find the value of the sum.

$$8 + \text{★}$$

What could Lin's number be?

Write equations to show your thinking.

4. Lin wrote a two-digit number with which you *can not* make a new ten when you find the value of the sum.

$$8 + \text{★}$$

What could Lin's number be?

Write equations to show your thinking.

5. How do you know whether or not you can make a new ten when you are finding the value of a sum?

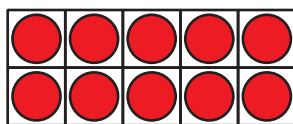
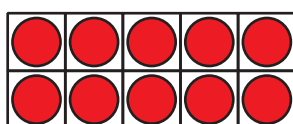
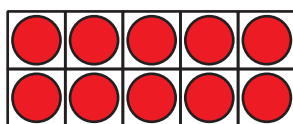
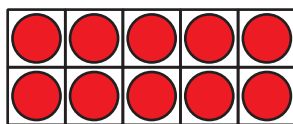
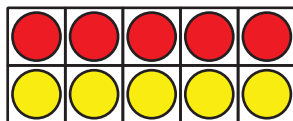
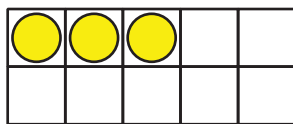
Section Summary

Section Summary

We added one-digit numbers and two-digit numbers.

We used different methods to add.

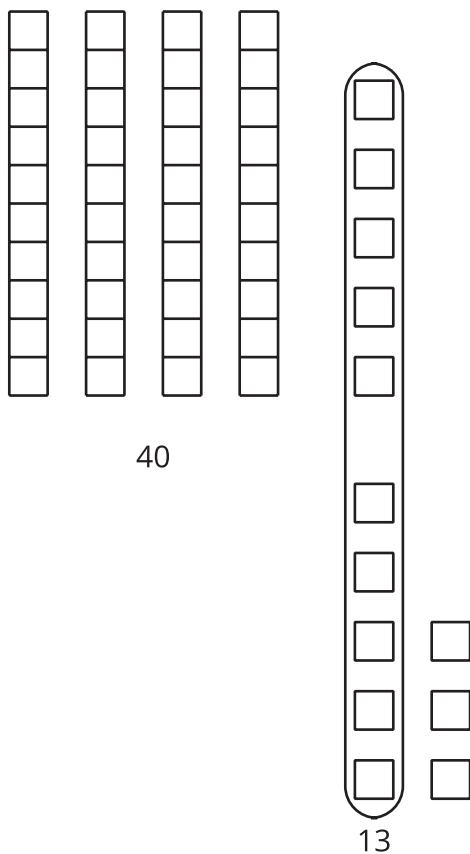
We learned you can think of counting on to make a new ten.



$$45 + 8$$

$$45 + 5 + 3 = \boxed{53}$$

We also saw you can think of adding all the ones and then the tens. Sometimes when you add the ones you might be able to make a new ten.



$$5 + 8 = 13$$

$$40 + 13 = 53$$

Lesson 8: Center Day 2

- Let's add within 100.

Warm-up: Number Talk: Add Within 100

Find the value of each expression mentally.

- $68 + 2$

- $3 + 68$

- $5 + 45$

- $45 + 7$

8.2: Centers: Choice Time

Choose a center.

Target Numbers



Number Puzzles

$$14 = 8 + \boxed{}$$

Five in a Row



8.3: Addition Stories

1. Priya watched a football game.
The home team scored 35 points in the first half.
In the second half they scored 6 more points.
How many points did they score all together?
Show your thinking using drawings, numbers, or words.

2. At the football game, 9 fans cheered for the visiting team.
There were 45 fans who cheered for the home team.
How many fans were at the game all together?
Show your thinking using drawings, numbers, or words.

Lesson 9: Add 2 Two-digit Numbers

- Let's add two-digit numbers.

Warm-up: Number Talk: Make a Ten

Find the value of each expression mentally.

- $38 + 2$

- $40 + 3$

- $38 + 5$

- $38 + 15$

9.1: How Did You Find the Value?

Find the value of $17 + 36$.

Show your thinking using drawings, numbers, or words.

9.2: Grab and Add

Round 1:

Grab a handful of towers of ten and a handful of single cubes.

I have _____ cubes and my partner has _____ cubes.

How many cubes do you and your partner have altogether?

Show your thinking using drawings, numbers, or words.

Round 2:

I have _____ cubes and my partner has _____ cubes.

How many cubes do you and your partner have altogether?

Show your thinking using drawings, numbers, or words.

Round 3:

I have _____ cubes and my partner has _____ cubes.

How many cubes do you and your partner have altogether?

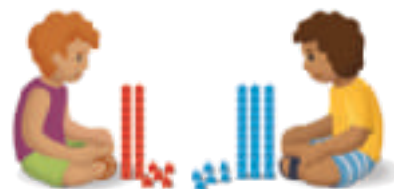
Show your thinking using drawings, numbers, or words.

Round 4:

I have _____ cubes and my partner has _____ cubes.

How many cubes do you and your partner have altogether?

Show your thinking using drawings, numbers, or words.



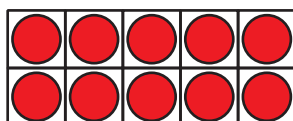
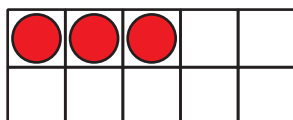
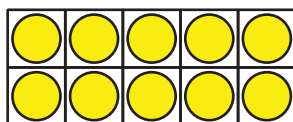
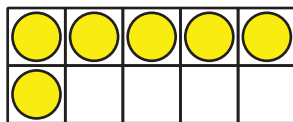
Lesson 10: Tens and Tens, Ones and Ones

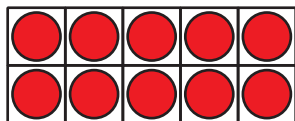
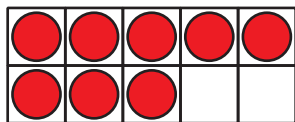
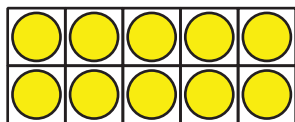
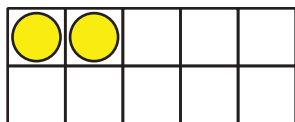
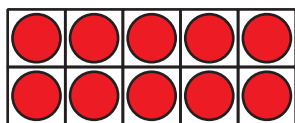
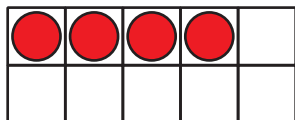
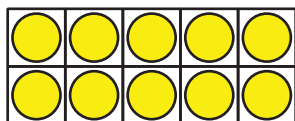
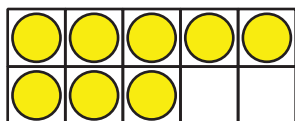
- Let's add two-digit numbers.

Warm-up: How Many Do You See: Tens and Ones

How many do you see?

How do you see them?

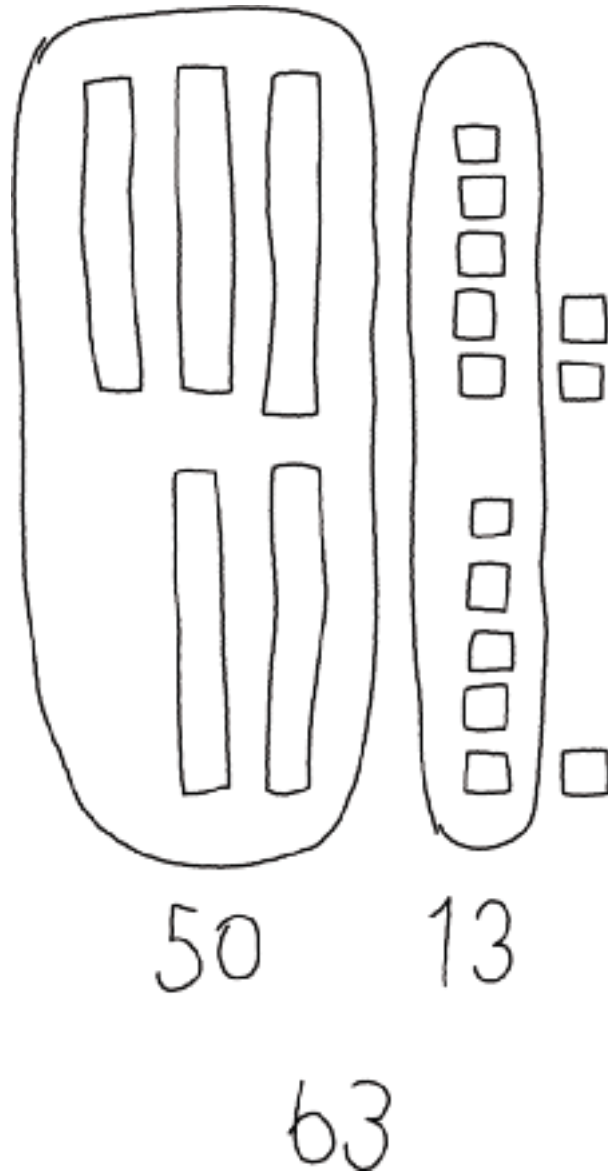




10.1: Priya's Work

Find the value of $37 + 26$.

Priya's work



How did Priya find the value?

10.2: Finish the Work

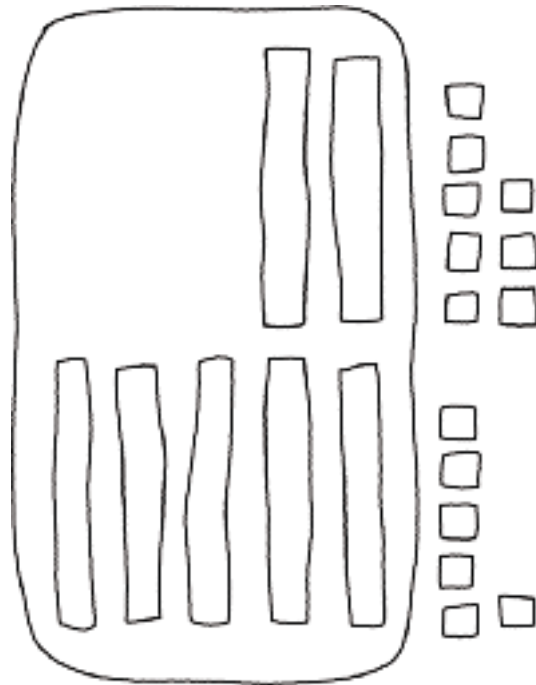
1. Each expression shows a first step to find the number that makes each equation true.

Finish the work to find the number that makes each equation true.

Show your thinking using drawings, numbers, or words.

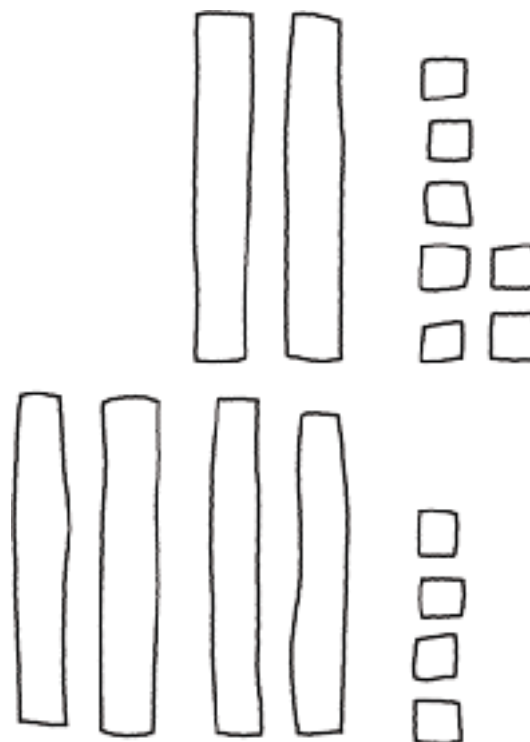
a. $28 + 56 =$

First step: $20 + 50$



b. $27 + 44 =$

First step: $7 + 4$



2. Find the value of each sum.

Show your thinking using drawings, numbers, or words.

a. $34 + 57$

b. $18 + 55$

Lesson 11: How Did You Do That?

- Let's add two-digit numbers and make sense of equations.

Warm-up: True or False: Add to a Two-digit Number

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

- $24 + 3 = 54$

- $42 + 5 = 47$

- $42 + 30 = 45$

11.1: How Much Litter?



Mai and her classmates volunteer to clean up the local park. They pick up 37 plastic bottles and 25 paper wrappers. How many pieces of litter did they pick up all together?

Jada, Kiran, and Tyler find the value of $37 + 25$ to find out how many pieces of litter Mai's class picked up.

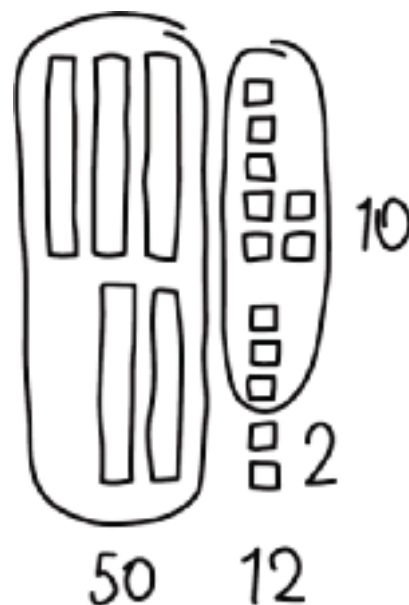
$$37 + 25$$

Jada's way:

$$30 + 20 = 50$$

$$7 + 5 = 12$$

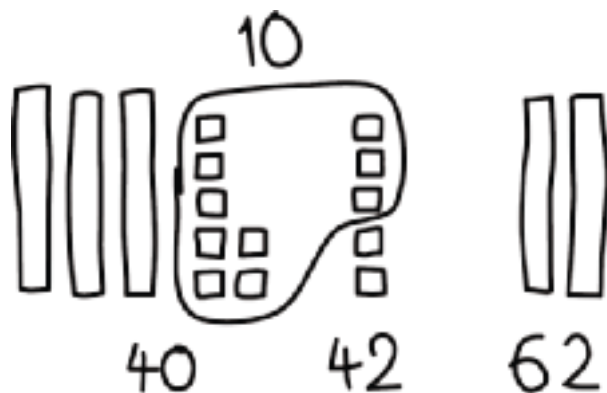
$$50 + 12 = 62$$



Kiran's way:

$$37 + 3 + 2 = 42$$

$$42 + 20 = 62$$



Tyler's way:

$$37 + 20 = 57$$

$$57 + 3 + 2 = 62$$

11.2: It's Your Turn to Add

Find the value of $23 + 68$.

Show your thinking using drawings, numbers, or words.

If you have time: Think about a math story this expression could represent.

Share your stories with a partner.



Lesson 12: Add it Up

- Let's add two-digit numbers and write equations.

Warm-up: Number Talk: Make a Ten

Find the value of each expression mentally.

- $7 + 3$
- $37 + 3$
- $7 + 8$
- $57 + 8$

12.1: Add Two-digit Numbers Within 100

Find the value of each sum using any method that you want.

Show your thinking using drawings, numbers, or words.

Write equations to represent your thinking.

1. $48 + 15$

2. $57 + 36$

12.2: Reason About Addition

37

22

18

56

41

Choose 2 numbers from above and write an addition expression to make each statement true.

- This sum has the smallest possible value.

Expression: _____

- This sum has the largest possible value.

Expression: _____

- You do not need to make a new ten to find the value of this sum.

Expression: _____

- If you make a new ten to find the value of this sum, you will still have some more ones.

Expression: _____

- If you make a new ten to find the value of this sum, you will have no more ones.

Expression: _____

Be ready to explain your thinking in a way that others will understand.

If you have time: Choose 2 numbers from above and write an addition expression where the value is closest to 95.
How do you know the value is closest to 95?



12.3: Ways We Volunteer

1. Mai's school is having a book drive.

They collect 48 children's books.

They collect 27 adult books.

How many books do they collect all together?

Show your thinking using drawings, numbers, or words.

2. The community soup kitchen has lots of volunteers who help serve food.

They have 35 volunteers during the week and 56 volunteers on the weekend.

How many volunteers do they have all together?

Show your thinking using drawings, numbers, or words.

3. Elena and her mother volunteer to plant a community garden in their neighborhood.

They plant 18 strawberry plants and 24 cucumber plants.

How many plants did they plant all together?

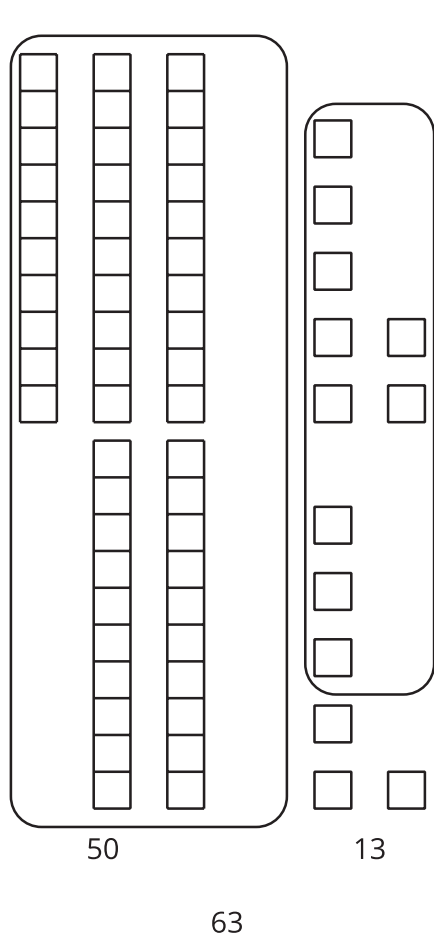
Show your thinking using drawings, numbers, or words.

Section Summary

Section Summary

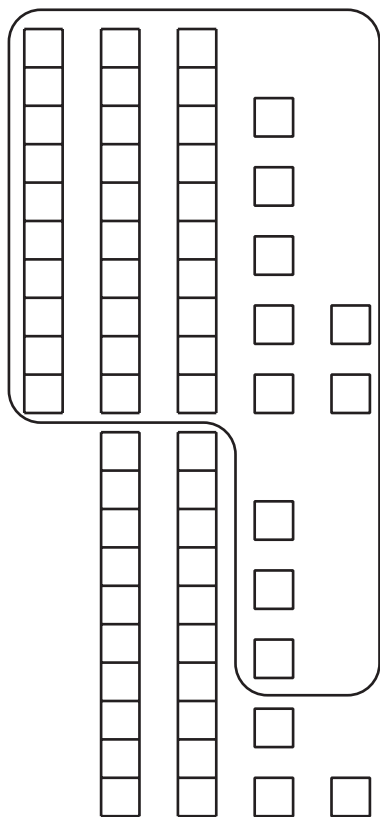
We learned to add any 2 two-digit numbers within 100 and write equations to represent our methods.

We added tens and tens and ones and ones.



$$\begin{aligned} 37 + 26 \\ 30 + 20 &= 50 \\ 7 + 6 &= 13 \\ 50 + 13 &= 63 \end{aligned}$$

We added ones first to make a new ten.



$$37 + 26$$

$$37 + 3 + 3 = 43$$

$$43 + 20 = 63$$

Lesson 13: Center Day 3

- Let's add 2 two-digit numbers.

13.1: Introduce Target Numbers, Add Two-Digit Numbers

Choose a center.

Target Numbers



Number Puzzles

$$14 = 8 + \boxed{}$$

Mystery Number



13.2: Introduce Five in a Row, Add within 100 with Composing

Choose a center.

Five in a Row



Get Your Numbers in Order



Grab and Count



Lesson 14: Food Drive

- Let's add two-digit numbers.

Warm-up: Estimation Exploration: Food Drive

How many cans did the first graders collect for the food drive?



Record an estimate that is:

too low	about right	too high

14.1: Cans for the Food Drive

Student	Cans Collected
Lin	18
Priya	24
Han	13
Tyler	30

Partner A: Write an equation to represent your thinking.

1. How many cans did Lin and Priya collect altogether?
2. How many cans did Han and Tyler collect altogether?
3. How many cans did all four students collect altogether?

Partner B: Write an equation to represent your thinking.

1. How many cans did Tyler and Priya collect altogether?
2. How many cans did Lin and Han collect altogether?
3. How many cans did all four students collect altogether?

14.2: Boxes of Cans

Room	Cans Collected on Day 1
Kindergarten	18
1st grade	51
2nd grade	23
3rd grade	13
4th grade	39
5th grade	40
6th grade	8
7th grade	29
8th grade	30

Find different ways they can pack the cans from 2 grades in a box together and have 35 to 65 cans in each box.

Try to find as many different ways as you can.

Write an equation to represent your thinking.

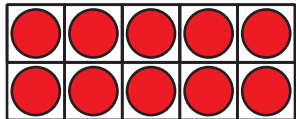
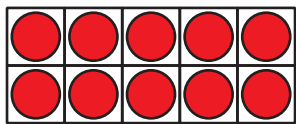
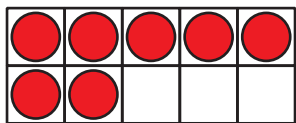
If you have time: Can any box have cans from 3 grade levels?
What is the least amount of boxes the school can pack to send to the Food Bank?

Section A: Practice Problems

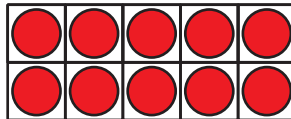
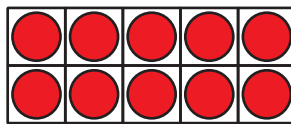
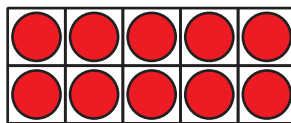
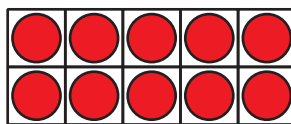
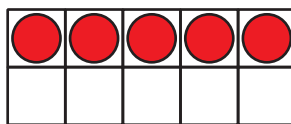
1. Pre-unit

How many do you see?

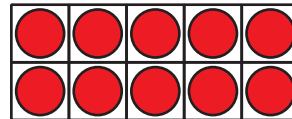
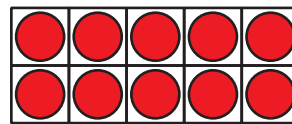
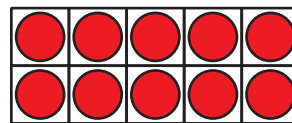
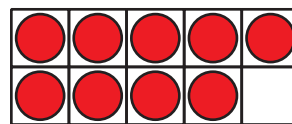
a.



b.



c.



2. Pre-unit

There are 9 ducks in the pond.

There are 7 ducks on the grass.

How many ducks are on the pond and in the grass?

Show your thinking using drawings, numbers, or words.

3. Pre-unit

Find the number that makes each equation true.

a. $10 + \square = 18$

b. $17 - \square = 7$

c. $9 + 8 = \square$

d. $19 = \square + 14$

4. Find the value of each sum.

Show your thinking using drawings, numbers, or words.

a. $65 + 3$

b. $65 + 30$

(From Unit 5, Lesson 1.)

5. Find the value of $31 + 24$.

Show your thinking using drawings, numbers, or words.

(From Unit 5, Lesson 2.)

6. a. Find the value of $26 + 53$

Show your thinking using drawings, numbers, words, or equations.

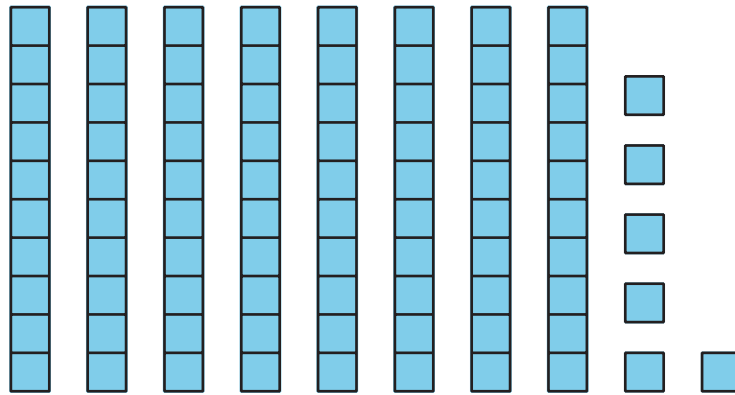
- b. Can you find the value in a different way?

(From Unit 5, Lesson 3.)

7. Exploration

- a. Find different ways you can use 2 two-digit numbers to make 86.

Use the drawing or connecting cubes, if they are helpful.



- b. Can you make 86 by adding a two-digit number to itself?

8. **Exploration**

Together Mai and Han have 75 counters.
How many counters could Mai have?
Then how many counters would Han have?
Find at least 5 different solutions.

Section B: Practice Problems

1. Find the value of each sum.

Show your thinking using drawings, numbers, or words.

a. $47 + 3$

b. $47 + 8$

(From Unit 5, Lesson 5.)

2. Find the value of each sum.

Show your thinking using drawings, numbers, or words.

a. $78 + 6$

b. $6 + 78$

(From Unit 5, Lesson 6.)

3. Find the value of each sum.

Show your thinking using drawings, numbers, or words.

a. $63 + 5$

b. $63 + 8$

c. How are the problems the same?

How are they different?

(From Unit 5, Lesson 7.)

4. Exploration

Choose five numbers from below to make a sum with a value greater than 50 but less than 99.

3 5 6 7 8 10 20 30 40

Use equations or drawing to show your thinking.

5. Exploration

Here is how Lin found the value of $58 + 9$.

"I know $8 + 9 = 17$. Then I add 5 tens and get 67."

- a. Why does Lin's method work? Show your thinking using drawings, numbers, or words.

- b. Use Lin's method to find the value of $83 + 8$.

6. Exploration

Noah's brother spilled water on his math work.
Help Noah figure out what the missing number is.

- a. The missing number makes the value of the sum **greater** than 50, with a 0 in the ones place.

$$41 + \text{?}$$

What could the missing number be?

- b. The missing number is a two-digit number that makes the value 75.

$$58 + \text{?}$$

What could the missing number be?

- c. The missing number is a two-digit number that makes a value that is **more** than 80 but **less** than 90.

$$65 + \text{★}$$

What could the missing number be?

7. Exploration

Priya is playing the game Target Numbers.
Priya starts at 25 and picks these six cards:

1 2 3 5 6 8

She chooses whether to add that many tens or ones for each card.

What is the highest score she can get without going over 95?
Use equations to show your thinking.

Section C: Practice Problems

1. Find the value of $35 + 48$.

Show your thinking using drawings, numbers, or words.

(From Unit 5, Lesson 9.)

2. a. Find the value of $16 + 55$.

Show your thinking using drawings, numbers, or words.

- b. Can you find the value in a different way?

(From Unit 5, Lesson 10.)

3. Use your favorite method to find the value of $34 + 59$.

Why do you like the method you chose?

(From Unit 5, Lesson 11.)

4. Choose a two-digit number to add to 46 so that you make a new 10.

Add the numbers.

Write equations to show your thinking.

(From Unit 5, Lesson 12.)

5. Exploration

Elena has a way to find the value of $28 + 47$ without making a 10. Here is her work.

$$30 - 2 = 28$$

$$50 - 3 = 47$$

$$80 - 5 = 75$$

- a. Explain why Elena's work is correct. Use connecting cubes if it is helpful.

- b. Use Elena's method to find the value of $39 + 55$.

6. Exploration

Diego and his friends are working on the same addition problem.

Diego's method

Lin's method

Priya's method

$$40 + 20 = 60$$

$$48 + 2 + 5 = 55$$

$$40 + 27 = 67$$

$$60 + 15 = 75$$

$$55 + 20 = 75$$

$$67 + 3 + 5 = 75$$

a. What is the addition problem Diego and his friends are working on?

b. Which method is your favorite?

Solve $56 + 28$ using your favorite method.

7. Exploration

Clare wrote some expressions.
 Each expression makes a ten.
 She spilled water on her work.
 Find the digit that could be under each water mark.

a.

$$2 \text{ [water mark]} + 3$$

b.

$$48 + \text{[water mark]}$$

c.

$$6 \text{ [water mark]} + 9$$

d.

$$75 + \text{snowflake}$$

e.

$$\text{snowflake} + 4 + 6$$

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