Core Knowledge® **MATHEMATICS**

Addition and Subtraction Story Problems

Student Workbook

Addition and Subtraction Story Problems

Table of Contents

Cumulative Practice Problems

Addition and Subtraction Story Problems
Student Workbook

Core Knowledge Mathematics™

Lesson 1: Story Problems and Expressions

- Let's make sense of and solve story problems.

Warm-up: Notice and Wonder: A Library

What do you notice?
What do you wonder?

1.1: The Library

1. Some kids were at the library.
   Then some of the kids went home.
   What do you notice?
   What do you wonder?

2. There were 9 kids at the library.
   Then 2 of the kids went home.
   How many kids are at the library now?
   Show your thinking using drawings, numbers, or words.

1.2: Story Problems about the Library

1. 5 books were on a shelf.
   Clare put 2 more books on the shelf.
   How many books are on the shelf now?
   Show your thinking using drawings, numbers, or words.

   Expression: _____

2. 6 books were stacked up on the table.
   4 of the books fell on the floor.
   How many books are still on the table?
   Show your thinking using drawings, numbers, or words.

   Expression: _____

3. 6 kids were listening to a story.
   4 more kids joined the group.
   How many kids are listening to the story now?
   Show your thinking using drawings, numbers, or words.

   Expression: _____

4. There were 5 computers turned on. The librarian turned 2 of the
   computers off.
   How many computers are still on?
   Show your thinking using drawings, numbers, or words.

   Expression: _____

Lesson 2: Story Problems and Equations

- Let's solve story problems and write equations.

Warm-up: Number Talk: Adding 1 More

Find the value of each expression mentally.

- $5 + 1$

- $5 + 2$

- $6 + 2$

- $7 + 3$

2.1: Write Equations

1. 7 people were working on the computers.
   3 more people came to the computers.
   Now 10 people are working on the computers.

   Equation: _____

2. A group of kids was using 10 puppets to act out a story.
   They put 5 of the puppets away.
   Now they have 5 puppets left.

   Equation: _____

3. 5 people came to story time.
   Then 4 more people joined.
   Now there are 9 people at story time.

   Equation: _____

4. 8 students were doing homework at a table.
   3 of the students finished their homework and left the table.
   Now there are 5 students at the table.

   Equation: _____

2.2: Solve and Write Equations

1. There was a stack of 6 books on the table.
   Someone put 4 more books in the stack.
   How many books are in the stack now?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

2. 9 books were on a cart.
   The librarian took 2 of the books and put them on the shelf.
   How many books are still on the cart?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

3. 2 kids were working on an art project.
   7 kids join them.
   How many kids are working on the art project now?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

4. The librarian had 8 bookmarks.
   He gave 5 bookmarks to kids at the library.
   How many bookmarks does he have now?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

Lesson 3: A Change is Coming

- Let's solve story problems and find the answer in equations.

Warm-up: Notice and Wonder: Kiran's Books

What do you notice?
What do you wonder?

Kiran has some books.
His friend gives him some more books.

3.1: Kiran's Books

Kiran has 6 books.

His friend gives him some more books.

Now he has 8 books.

How many books did Kiran get from his friend?

Show your thinking using drawings, numbers, or words.

3.2: Lin Represents a Story Problem

1. Andre checked out some books from the library.
   Mai gives him more books.
   Now he has 9 books.

   What do you notice?
   What do you wonder?

2. Andre checked out 3 books from the library.
Mai gives him some more books.
Now he has 9 books.
How many books did Mai give him?

Lin made this drawing.

| | |

3

Andre's books

| | | | | |

4 5 6 7 8 9

Mai's books

She wrote the equation

$$3 + 6 = \boxed{9}$$

Is her equation correct?
Show your thinking using drawings, number, or words.

3.3: Centers: Choice Time

Choose a center.

Sort and Display

Check it Off

What's Behind My Back

Lesson 4: Result or Change Unknown

- Let's solve story problems and write equations to match.

Warm-up: True or False: Equations with 10

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

- $10 = 10$

- $4 + 6 = 10$

- $2 + 7 = 10$

4.1: Compare the Problems

1. Mai has 5 graphic novels.
   She checks out 4 more.
   How many graphic novels does she have?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

2. Mai has 5 graphic novels.
   She checks out some more.
   Now she has 9 graphic novels.
   How many graphic novels did she check out?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

4.2: Story Problems about Books

1. Mai has read 3 books about dogs.
   Diego gives her 4 more books to read.
   How many books about dogs will Mai read all together?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

2. Noah has 4 books of poetry.
   His sister gives him some more books.
   Now he has 10 books of poetry.
   How many books did his sister give him?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

3. Tyler has 7 books about spiders.
   He gives 3 of his books to Kiran.
   How many books does Tyler have left?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

4. Lin has 5 books about outer space.
   Her teacher gives her some more books.
   Now she has 10 books about outer space.
   How many books did Lin's teacher give her?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

Section Summary

Section Summary

We solved story problems and represented them with objects, drawings, words, and equations.

- We solved story problems with addition.

  Mai has read 3 books about dogs.
  Diego gives her 4 more books to read.
  How many books about dogs will Mai read all together?

  3 books Mai read   4 more books

  $3 + 4 = \boxed{7}$

- We solved story problems with subtraction.

  Tyler has 7 books about spiders.
  He gives 3 to Kiran to read.
  How many books does Tyler have left?

  3 books to Kiran

  7 spider books $7 - 3 = \boxed{4}$

  4 books left

- We solved story problems where the change was unknown.

  Lin has 5 books.
  Her teacher gives her some more books.
  Now she has 10 books to read.
  How many books did her teacher give her?

  Lin's books

  $$5 + \boxed{5} = 10$$

  5 books
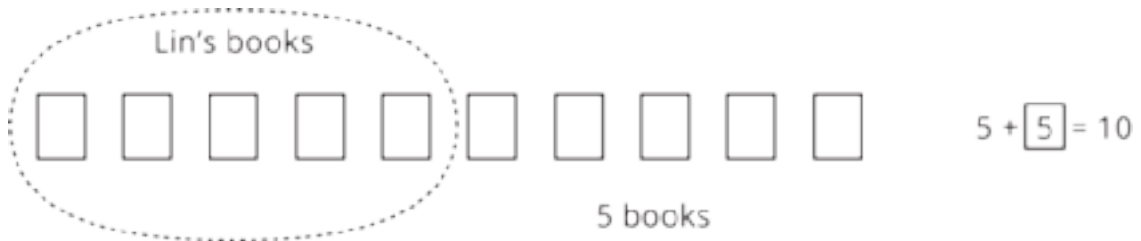
- We learned that the equal sign means "the same amount as" and "equals."

Lesson 5: Center Day 1

- Let's play games to practice adding and subtracting.

Warm-up: Notice and Wonder: Math Picture

What do you notice?
What do you wonder?

5.2: Centers: Choice Time

Choose a center.

Sort and Display

Math Stories

Find the Pair

Lesson 6: Problems about Pets

- Let's solve problems and write equations.

Warm-up: Notice and Wonder: The Fish Tank

What do you notice?
What do you wonder?

There are some fish in the tank.
Some of the fish are red and some are blue.

6.1: Three Reads: Kiran's Fish

Kiran has some fish in his fish tank.
He has 4 red fish and 5 blue fish.
How many fish does he have in all?
Show your thinking using drawings, numbers, or words.

Equation: _____

6.2: Tyler's and Clare's Pets

Tyler and Clare want to know how many pets they have together.
Tyler has 2 turtles.
Clare has 4 dogs.

Tyler wrote the equation $4 + 2 = \boxed{6}$.
Clare wrote the equation $2 + 4 = \boxed{6}$.

Do both equations match the story?
Why or why not?
Show your thinking using drawings, numbers, or words.

6.3: Centers: Choice Time

Choose a center.

Math Stories

Find the Pair

What's Behind My Back

Lesson 7: Shake and Spill

- Let's think about breaking numbers apart and putting them back together.

Warm-up: How Many Do You See: Two-color Counters

How many do you see?
How do you see them?
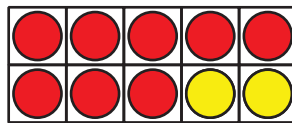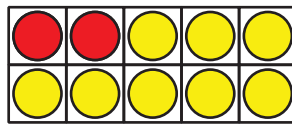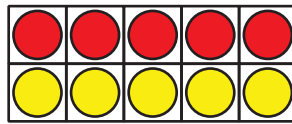
7.1: Revisit Shake and Spill, Represent

total number of counters	red counters	yellow counters	equations

Round 1:

total number of counters	red counters	yellow counters	equations
9			
9			
9			
9			
9			
9			

7.2: Shake and Spill Story Problems

1. Elena is playing Shake and Spill.
   She has 7 counters.
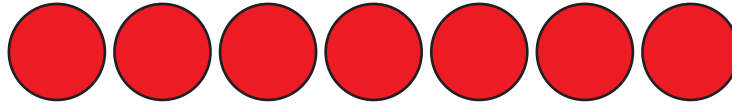
What are some ways to show some red and some yellow?
Show your thinking using drawings, numbers, or words.
Write an equation to show each combination.

2. Tyler is playing Shake and Spill.
   During his first round he spilled these counters:
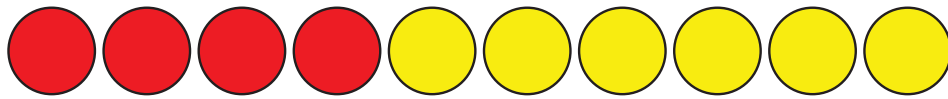
   Write 2 equations to show his counters.

   Show other combinations of red and yellow counters that Tyler
   could spill.
   Show your thinking using drawings, numbers, or words.
   Write an equation to show each combination.

If you have time, solve the following problems.

1. What are all the combinations Elena could have?

   How do you know?

   _____

   _____

2. What are all the combinations Tyler could have?

   How do you know?

   _____

   _____

Lesson 8: Shake, Spill, and Cover

- Let's solve a new kind of story problem.

8.1: Introduce Shake and Spill, Cover

total number of counters	red counters	yellow counters	equations

Round 1:

total number of counters	red counters	yellow counters	equations
10			
10			
10			
10			
10			
10			

8.2: Shake and Spill, Cover Problems

1.

There are 9 counters total.
How many counters are under the cup?

Equation: _____

2.

There are 7 counters total.
How many counters are under the cup?

Equation: _____

3. There are 6 counters outside the cup.
   Some of the counters are under the cup.
   There are 10 counters total.
   How many counters are under the cup?

   Equation: _____

4. There are 3 counters outside the cup.
   Some of the counters are under the cup.
   There are 8 counters total.
   How many counters are under the cup?

   Equation: _____

Lesson 9: Compare Story Problems

- Let's solve story problems and write equations.

Warm-up: Number Talk: Addition and Subtraction Expressions

Find the value of each expression mentally.

- $4 + 6$

- $6 + 4$

- $10 - 6$

- $10 - 4$

9.1: Solve and Represent Story Problems

1. Han has 5 lizards.
   He has 3 snakes.
   How many pets does he have?

   Show your thinking using drawings, numbers, or words.

   Equation: _____

2. Han has 8 pets.

   5 of his pets are lizards.

   The rest of his pets are snakes.

   How many snakes does Han have?

   Show your thinking using drawings, numbers, or words.

   Equation: _____

3. Han has an aquarium that can hold 8 pets.

   He has lizards and snakes.

   Show different ways Han could fill his aquarium.

   Show your thinking using drawings, numbers, or words.

   Equation: _____

9.2: Gallery Walk: Compare the Story Problems

As you look at your classmates' work, think about the questions and be prepared to share your answers.

1. What is the same about the story problems and representations?

_____

_____

2. What is different about the story problems and representations?

_____

_____

3. Explain how the equation matches the story problem.

_____

_____

Section Summary

Section Summary

In this section, we solved story problems.

- We solved story problems where the total was unknown.

  Kiran has some fish in his fish tank.
  He has 4 red fish and 5 blue fish.
  How many fish does he have in all?
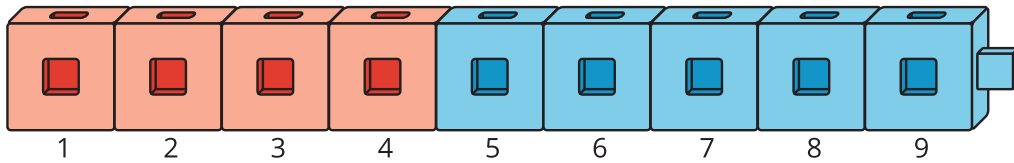
$$4 + 5 = \boxed{9}$$

- We solved story problems where both parts were unknown.

  Tyler is playing Shake and Spill.
  He is playing with 10 counters.

  Show different combinations of
  red and yellow counters that
  Tyler could spill.

$$\boxed{4} + \boxed{6} = 10$$

$$\boxed{6} + \boxed{4} = 10$$

$$\boxed{5} + \boxed{5} = 10$$

$$\boxed{7} + \boxed{3} = 10$$

- We solved problems where the second part was unknown.

  6 counters are outside the cup.
  Some of the counters are under the cup.
  There are 10 counters total.
  How many counters are under the cup?

  I can count on from 6 to 10.

$$6 + \boxed{4} = 10$$

- We learned that the total can come before or after the equal sign.

$$10 = 4 + 6 \text{ is the same as } 4 + 6 = 10$$

- We learned that numbers can be added in any order.

$$4 + 6 = 10 \text{ is the same as } 6 + 4 = 10$$

Lesson 10: Center Day 2

- Let's play games to practice adding and subtracting.

Warm-up: Number Talk: Subtraction Methods

Find the value of each expression mentally.

- $7 - 2$

- $8 - 2$

- $7 - 5$

- $8 - 6$

10.2: Centers: Choice Time

Choose a center.

Math Stories

Shake and Spill
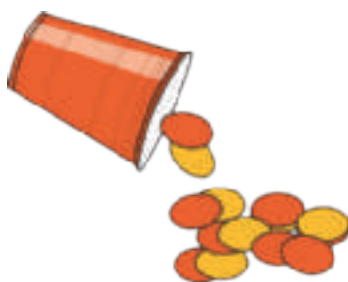
Capture Squares

Lesson 11: Make Them the Same

- Let's make cube towers have the same number of cubes.

Warm-up: Notice and Wonder: Cube Towers

What do you notice?
What do you wonder?
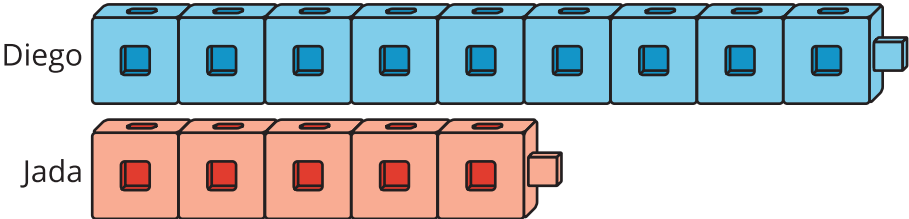
11.1: Cube Towers

How can Diego and Jada make their towers have the same number of cubes?

Show your thinking using drawings, numbers, or words.

1.

Diego

Jada

2.

Diego

Jada

3.

Diego

Jada
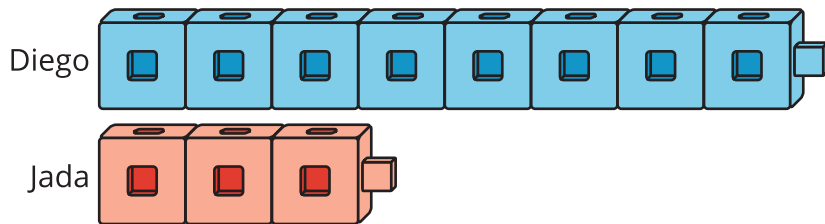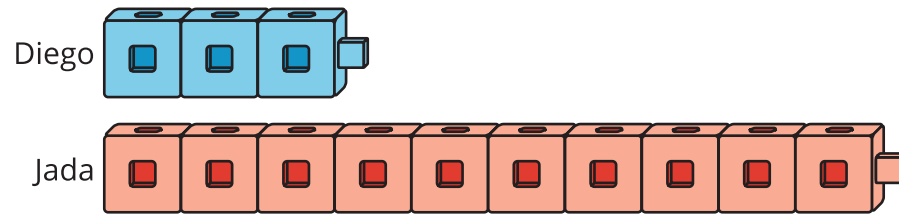
11.2: Cube Tower Problems

1.
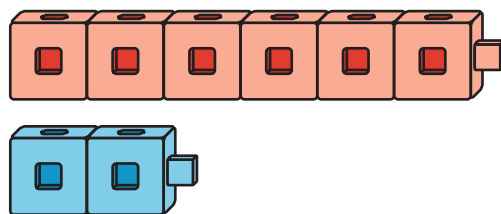
Lin has only blue cubes.

How can Lin make the towers have the same number of cubes?

Show your thinking using drawings, numbers, or words.

2.
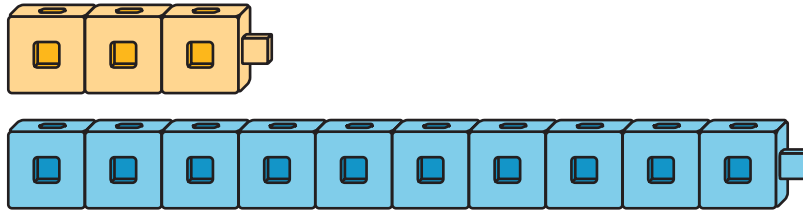
Lin has no more yellow cubes.
How can she make the towers have the same number of cubes?
Show your thinking using drawings, numbers, or words.

3. Lin is making 2 cube towers.

   The red tower has 6 cubes.

   The blue tower has 9 cubes.

   She has no more red cubes.

   How can she make the towers have the same number of cubes?

   Show your thinking using drawings, numbers, or words.

4. Lin is making 2 cube towers.

   The yellow tower has 7 cubes.

   The red tower has 3 cubes.

   She only has red cubes.

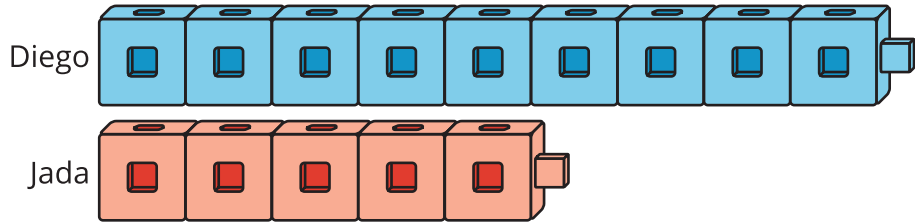   How can she make the towers have the same number of cubes?

   Show your thinking using drawings, numbers, or words.

If you have time: Write your own problem about 2 cube towers.

_____

_____

_____

_____

Trade problems with a partner and solve.

Lesson 12: School Supplies

- Let's find the difference between quantities.

Warm-up: Notice and Wonder: School Supplies

What do you notice?
What do you wonder?

12.1: Not Enough Pencils

There are 10 students at the table.
There are 6 pencils.
How many students won't get a pencil?
Show your thinking using drawings, numbers, or words.

12.2: Compare Problems

1. There are 9 markers in a bin.
   There are 4 caps for the markers.
   How many more caps are needed so that each marker has a cap?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

2. There are 2 folders on the teacher's desk.
   There are 9 folders on the supply table.
   How many fewer folders are there on the desk than the table?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

3. There are 5 dry erase boards at each table.
   There are 8 markers at each table.
   How many more markers are there than dry erase boards at each table?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

Lesson 13: Compare Favorite Art Supply Data

- Let's compare data.

Warm-up: Notice and Wonder: More and Fewer

What do you notice?
What do you wonder?

crayons	☐☐☐☐☐
paint	☐☐☐☐☐☐
markers	☐☐☐☐☐☐☐☐
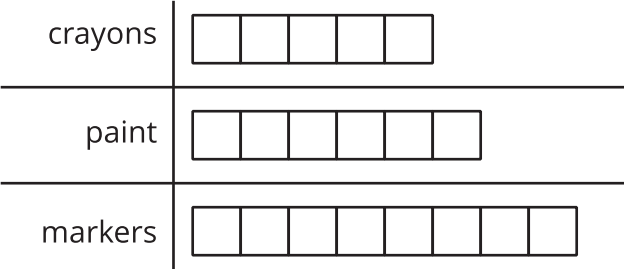
13.1: Compare Data (Part 1)

A group of students was asked, "What is your favorite art supply?" Their responses are shown in this chart.

Favorite Art Supply

| crayons | |
| markers | |

crayons — □□□□□
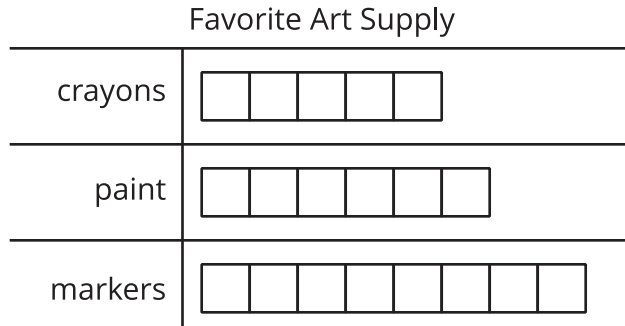
paint — □□□□□□

markers — □□□□□□□□

1. More students voted for crayons than markers.

👍 True   or   👎 False

2. Fewer students voted for crayons than paint.

👍 True   or   👎 False

3. Three more students voted for markers than crayons.

True   or   False

Show your thinking using drawings, numbers, or words.

4. One more student voted for paint than crayons.

True   or   False

Show your thinking using drawings, numbers, or words.

5. One fewer student voted for paint than markers.

True   or   False

Show your thinking using drawings, numbers, or words.

If you have time: Change the false statements to make them true.

13.2: Compare Data (Part 2)

Another group of students was asked, "What is your favorite art supply?"
Their responses are shown in this chart.

Favorite Art Supply

crayons	paint	markers
10	7	6

Favorite Art Supply
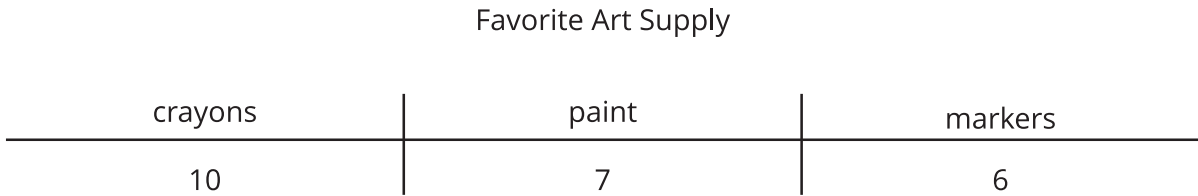
crayons	paint	markers
10	7	6
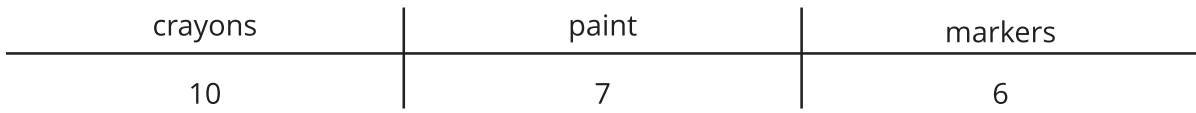
1. How many more students voted for crayons than for paint?
   Show your thinking using drawings, numbers, or words.

2. How many fewer students voted for markers than paint?
   Show your thinking using drawings, numbers, or words.

3. How many more students voted for crayons than markers?
   Show your thinking using drawings, numbers, or words.

4. How many fewer students voted for markers than crayons?
   Show your thinking using drawings, numbers, or words.

Lesson 14: Compare with Addition and Subtraction

- Let's solve story problems and match them to addition and subtraction equations.

Warm-up: True or False: Equal Sign

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

- $7 + 3 = 10$

- $10 = 7 + 3$

- $10 = 3 + 6$

14.1: Is It Addition or Subtraction?

There are 8 glue sticks and 3 scissors at the art station. How many fewer scissors are there than glue sticks?

Mai created a picture.

glue sticks ⬤⬤⬤⬤⬤⬤⬤⬤

scissors 🟡🟡🟡

She is not sure which equation she should use to find the difference.

$$8 - 3 = \boxed{5}$$
$$3 + \boxed{5} = 8$$

Help her decide.
Show your thinking using drawings, numbers, or words.

14.2: Which Equation?

1. There are 5 red pillows and 3 blue pillows on the reading rug.
How many more red pillows are there than blue pillows?
Show your thinking using drawings, numbers, or words.

Circle the equation that matches the problem.

$5 + 3 = \square$

$5 - 3 = \square$

$5 + \square = 3$

$3 + \square = 5$

2. There are 7 calculators on the table.
   There are 8 math books.
   How many more math books are there than calculators?
   Show your thinking using drawings, numbers, or words.

   Circle the equation that matches the problem.

   $7 + \square = 8$

   $8 - 7 = \square$

   $7 - 8 = \square$

   $8 + \square = 7$

3. In Mr. Green's class, 3 students have purple backpacks and 7 students have black backpacks.

How many more students have black backpacks than purple backpacks?

Show your thinking using drawings, numbers, or words.

Circle the equation that matches the problem.

$3 + 7 = \boxed{}$

$3 + \boxed{} = 7$

$7 - \boxed{} = 3$

$7 + \boxed{} = 3$

14.3: Centers: Choice Time

Choose a center.

Capture Squares

Math Stories

Shake and Spill

Lesson 15: Different Types of Story Problems

- Let's solve story problems and write equations to match.

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

Which one doesn't belong?

A. $7 = \boxed{7}$

B. $\boxed{7} = 3 + 4$

C. $4 + 3 = \boxed{8}$

D. $7 - 3 = \boxed{4}$

15.1: What Questions Can We Ask?

What mathematical questions can you ask about this image?

_____

_____

_____

_____

15.2: Different Types of Problems

1. There are 8 people at the table.
   6 of the people are students.
   How many are teachers?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

   Equation: _____

2. Elena has 4 pattern blocks.
   Tyler has 6 pattern blocks.
   How many fewer pattern blocks does Elena have than Tyler?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

   Equation: _____

3. Tyler has 6 pattern blocks.

Elena has 4 patterns blocks.

How many pattern blocks do they have altogether?

Show your thinking using drawings, numbers, or words.

Equation: _____

Equation: _____

4. Priya has 7 triangles and 3 squares.

   How many more triangles than squares does Priya have?

   Show your thinking using drawings, numbers, or words.

   Equation: _____

   Equation: _____

15.3: Centers: Choice Time

Choose a center.

Capture Squares
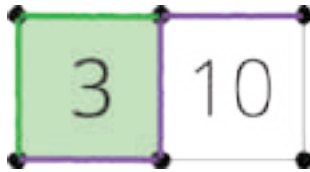
Shake and Spill
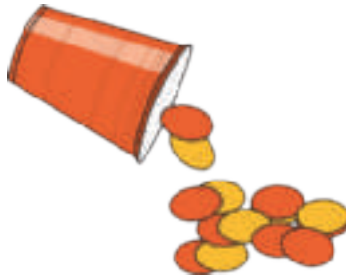
What's Behind My Back

Section Summary

Section Summary

- We made cube towers that have the same number of cubes.
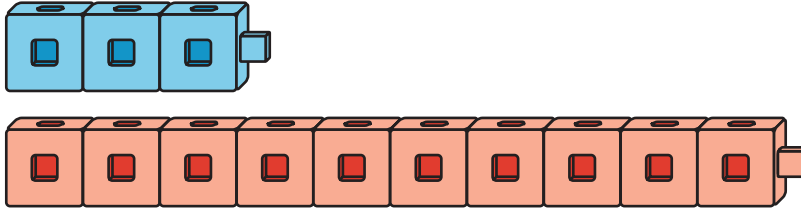
  We can add 7 more blue cubes.
  We can take off 7 red cubes.

- We solved story problems about "how many more" and "how many fewer."
  Elena has 4 pattern blocks.
  Tyler has 6 pattern blocks.
  How many fewer pattern blocks does Elena have than Tyler?

$$4 + \boxed{2} = 6 \qquad \text{or} \qquad 6 - 4 = \boxed{2}$$

- We learned that these problems can be solved with addition or subtraction.

Lesson 16: Center Day 3

- Let's play games to practice adding and subtracting.

Warm-up: Number Talk: Subtraction

Find the value of each expression mentally.

- $9 - 7$

- $9 - 2$

- $8 - 6$

- $8 - 2$

16.2: Centers: Choice Time

Choose a center.

Math Stories

Shake and Spill
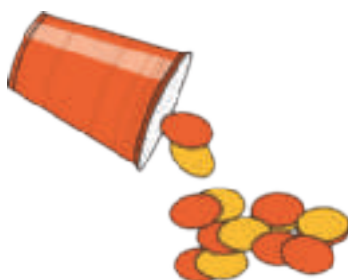
What's Behind My Back

Lesson 17: How Do the Stories Compare?

- Let's think about how stories are the same and different.

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

Which one doesn't belong?

A. $6 + 4 = 10$

B. $10 - 4 = 6$

C. $2 + 2 + 2 = 6$

D. $6 = 2 + 4$

17.1: Compare Stories

1. Compare these stories about playing 4 corners.

There are 6 students playing 4 corners.
Some more students come to play.
Now there are 9 students playing 4 corners.
How many students came to play?

9 students are playing 4 corners.
7 students are waiting in a corner.
The other students are still deciding which corner to pick.
How many students are still deciding which corner to pick?

- How are these problems alike?

- How are they different?

Be prepared to share your thinking.

2. Compare these stories about playing charades.

There were 9 students playing charades.
6 students leave to play something different.
How many students are playing charades now?

9 students are playing charades.
5 students are on Team A.
The rest of the students are on Team B.
How many students are on Team B?

○ How are these problems alike?

○ How are they different?

Be prepared to share your thinking.

17.2: Outdoor Games

Show your thinking using drawings, numbers, or words.

Equation: _____

Lesson 18: Equations with Unknowns

- Let's make sense of equations with empty boxes.

Warm-up: Notice and Wonder: Equations with an Unknown

What do you notice?
What do you wonder?

$$4 + \boxed{} = 10$$

18.2: Which Equation?

9 students are playing bingo.
3 students are using blue chips to cover their boards.
The other students are using yellow chips.
How many students are using yellow chips?

Explain how each equation matches the story problem.
Show your thinking using drawings, numbers, or words.

1. Clare wrote $3 + \boxed{} = 9$

2. Jada wrote $9 - 3 = \boxed{}$

Lesson 19: Story Problems and Equations

- Let's write 2 equations to match each story problem.

19.1: Lotería

1. 10 picture cards have been called.
   7 of the pictures are on Mai's board.
   How many of the pictures are not on Mai's board?
   Show your thinking using drawings, numbers, or words.
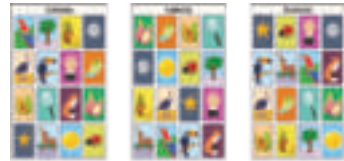
   Equation: _____

   Equation: _____

2. Lin has 10 beans to play with.
   3 of her beans fall on the floor.
   How many beans does Lin have to play with now?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

   Equation: _____

3. 10 students are playing Lotería.
   Some students are using beans on their boards.
   Some students are using small rocks.
   What are some ways to show how many students are using beans and how many are using small rocks?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

   Equation: _____

4. Noah has 3 pictures covered on his board.
   His brother has 10 pictures covered.
   How many fewer pictures does Noah have covered than his brother?
   Show your thinking using drawings, numbers, or words.
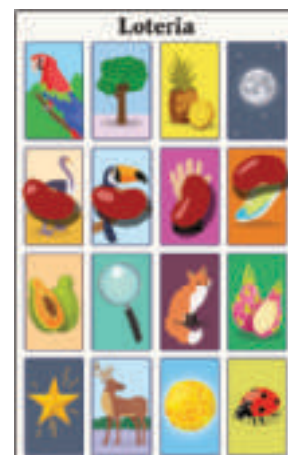
   Equation: _____

   Equation: _____

19.2: What's Your Question?

1. Clare has 3 pictures covered on her board.
   She covers some more.
   Now she has 9 pictures covered.

   What is a question you can ask about the story?

   _____

   _____

   Show your thinking using drawings, numbers, or words.

   Which equation matches how you solved the story problem?

   $3 + \boxed{} = 9$

   $9 - 3 = \boxed{}$

2. Diego has 2 beans on his board.
   Noah has 9 beans on his board.

   What is a question you can ask about the story?

   _____

   _____

   Show your thinking using drawings, numbers, or words.

   Which equation matches how you solved the story problem?

   $2 + \boxed{} = 9$

   $9 - 2 = \boxed{}$

Lesson 20: What's the Story?

- Let's write story problems to match equations.

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

How many do you see?
How do you see them?
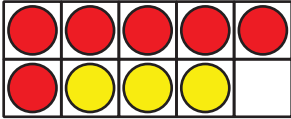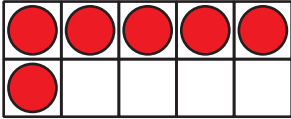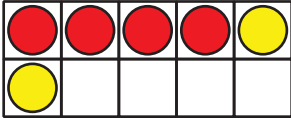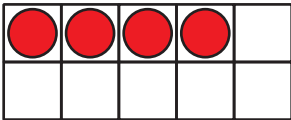
20.1: Write Story Problems

Choose 2 equations. Write a story problem for each equation.

- $3 + 5 = \square$
- $4 + \square = 7$
- $10 - 5 = \square$
- $9 = 5 + \square$
- $\square + \square = 10$
- $6 + \square = 9$
- $8 = 2 + \square$

1. Equation: _____

   Story Problem:

   _____

   _____

   _____

   _____

2. Equation: _____

   Story Problem:

   _____

   _____

   _____

   _____

20.2: I've Got the Answer

Circle a number that represents your answer.

2   3   4   5   6   7   8   9   10

Write an equation that includes the number you chose.
Put a box around the number.

Equation: _____

Write a story problem that matches your equation.

_____

_____

_____

Share your story problem with a partner.
Solve your partner's story problem.

Write the equation that matches the story problem.

Equation: _____

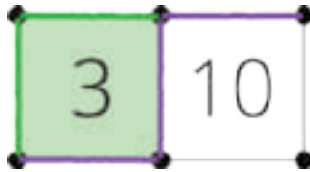## 20.3: Centers: Choice Time

Choose a center.

Capture Squares

Shake and Spill
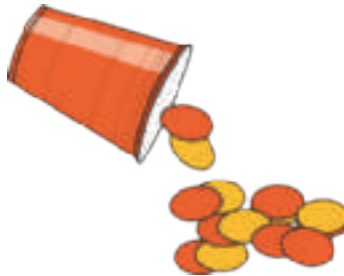
What's Behind My Back

Section Summary

Section Summary

- We learned about equations where a number is missing and related them to story problems.

  Lin has 5 bingo chips on her board.
  She also has some chips on the table.
  All together she has 9 bingo chips.
  How many chips does Lin have on the table?

  $$9 - 5 = \boxed{}$$
  and
  $$5 + \boxed{} = 9$$

- We thought about how addition and subtraction are related by solving story problems using both addition and subtraction.

  9 students are playing bingo.
  3 students are using blue chips to cover their boards.
  The other students are using yellow chips.
  How many students are using yellow chips?

  Clare wrote $3 + \boxed{} = 9$
  Jada wrote $9 - 3 = \boxed{}$
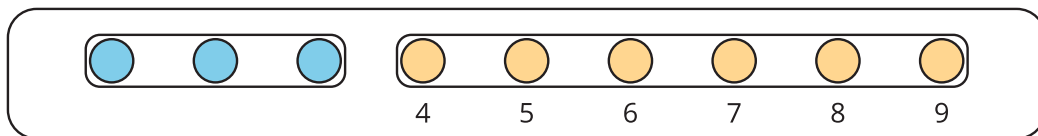
  9 students playing bingo

- We wrote our own story problems to match equations.

  Try writing a story to match these equations.

$$7 + 2 = \boxed{}$$
$$6 + \boxed{} = 9$$

Lesson 21: Center Day 4

- Let's play games to practice adding and subtracting.

Warm-up: Number Talk: Missing Values

Find the missing value mentally.

- $4 + \square = 5$

- $5 - \square = 4$

- $6 + \square = 8$

- $8 - \square = 6$

21.2: Centers: Choice Time

Choose a center.

Capture Squares

Math Stories

What's Behind My Back

Lesson 22: Story Problems and Equations

- Let's write our own equations.

Warm-up: Notice and Wonder: Equations

What do you notice?
What do you wonder?

$$4 + 5 = 9$$

$$4 + \boxed{} = 9$$

$$\boxed{} + \boxed{} = 9$$

22.1: Revisit Data

Write at least 3 equations that match your survey data.

22.2: Questions and Answers

1. How many more students liked_____

   than liked _____?

   Show your thinking using drawings, numbers, or words.

   Equation: _____

2. How many fewer students liked _____

   than liked _____?

   Show your thinking using drawings, numbers, or words.

   Equation: _____

3. Write another story problem you could ask about your data.

_____

_____

_____

_____

Equation: _____

Section A: Practice Problems

1. **Pre-unit**

   There are 2 plants in the classroom.
   The teacher brings 3 more plants.
   How many plants are in the classroom now?
   Show your thinking using drawings, numbers, or words.

2. **Pre-unit**

   There are 8 cars parked on the street.
   Some cars are red and some are blue.
   Show how many red and blue cars could be on the street.
   Show your thinking using drawings, numbers, or words.

3. **Pre-unit**

Write a number in the blank to make each equation true.

a. $7 + \boxed{} = 10$

b. $4 + \boxed{} = 10$

c. $\boxed{} + 2 = 10$

4. There are 7 books on the shelf.
   Mai takes 2 of the books off the shelf.
   How many books are on the shelf now?
   Does this story match the equation $7 - 2 = 5$ or $7 + 2 = 9$?
   Show your thinking using drawings, numbers, or words.

   Equation: _____

   (From Unit 2, Lesson 2.)

5. There were 7 kids playing in the swimming pool.
   Then some more kids came to play with them.
   Now there are 10 kids playing in the swimming pool.
   How many kids came to play?
   Show your thinking using drawings, numbers, or words.

(From Unit 2, Lesson 3.)

6. There were 3 students on the playground.
   Some more students came to the playground.
   Now there are 9 students on the playground.
   How many students came to the playground?

   Show your thinking using drawings, numbers, or words.

Equation: _____

(From Unit 2, Lesson 4.)

7. **Exploration**

    a. Write an addition or subtraction story problem about something you did this week.

_____

_____

_____

    b. Trade your problem with a friend and solve your friend's problem.

8. **Exploration**

Choose one of the equations.

a. $5 + \square = 8$

b. $8 - 3 = \square$

c. $3 + \square = 8$

d. $5 + 3 = \square$

Write a story problem that the equation matches.

_____

_____

_____

_____

Trade with a partner and decide which equation matches your partner's story.

Section B: Practice Problems

1. There are 3 first graders and 6 second graders on the soccer team.
   How many kids are on the soccer team?

   a. Make a drawing to match the story.

   b. Write an equation to match the story.

   (From Unit 2, Lesson 6.)

2. Han is playing Shake and Spill.
   He uses 8 counters.

   a. Show 3 different ways Han's counters could look.

red counters	yellow counters	equation

   b. Pick one of your equations and describe how it matches the counters.

   _____

   _____

   (From Unit 2, Lesson 7.)

3. The table shows the number of counters for Shake and Spill. Fill in the missing numbers.

total	red	yellow
10	5	
10	7	
8	1	
8	3	
9	6	

(From Unit 2, Lesson 8.)

4. a. There are 9 beads on the bracelet.
       2 of them are pink and the rest are green.
       How many green beads are on the bracelet?
       Show your thinking using drawings, numbers, or words.

       Equation: _____

    b. There are 9 beads on the bracelet.
       Some are pink and the rest are green.
       How many pink and green beads could there be on the
       bracelet?
       Show your thinking using drawings, numbers, or words.

       Equation: _____

    (From Unit 2, Lesson 9.)

5. **Exploration**

Han spilled some counters on his desk and recorded whether they were red or yellow.
The table shows some of Han's results.

| red	yellow	number of counters
5		10
	2	9
3	4	
		8
5		
	3	
		10

a. Write a number in each empty spot in the table.

b. Are there some empty spots you could fill in more than one way?
Show your thinking using drawings, numbers, or words.

_____

_____

6. **Exploration**

Roll 2 number cubes (labeled 0 through 5) and find the total.
Show your partner one of the number cubes and tell them the total.
Your partner figures out the number on the number cube you are hiding.

7. **Exploration**
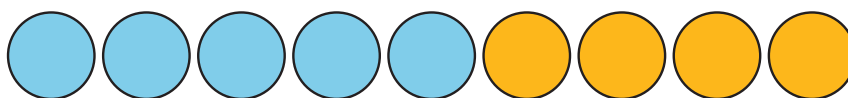
a. Write a story with a question that could go with the picture.

_____

_____

_____

_____

b. Write an equation that matches your story.

Section C: Practice Problems

1. A tower of green connecting cubes has 8 cubes.
   A tower of yellow connecting cubes has 2 cubes.
   Show 2 different ways to make the towers have the same number of cubes.
   Show your thinking using objects, drawings, numbers, or words.

   (From Unit 2, Lesson 11.)

2. There are 10 dragons in the cave.
   There are 3 dragons flying outside.
   How many fewer dragons are flying than are in the cave?
   Show your thinking with drawings, numbers, or words.

   (From Unit 2, Lesson 12.)

3. Here are the colors of some hot air balloons that Tyler saw.

yellow	orange	blue
10	3	6

   a. How many more yellow balloons did Tyler see than orange balloons?
   Show your thinking using drawings, numbers, or words.

   b. How many fewer blue balloons did Tyler see than yellow balloons?
   Show your thinking using drawings, numbers, or words.

   (From Unit 2, Lesson 13.)

4. There are 7 candles on the cake.
   There are 10 candles in the box.
   How many fewer candles are on the cake than in the box?
   Show your thinking with drawings, numbers, or words.

Circle the 2 equations that match the story.

$10 + 7 = \boxed{}$ $\qquad\qquad$ $10 - 7 = \boxed{}$

$7 + \boxed{} = 10$ $\qquad\qquad$ $7 - 10 = \boxed{}$

(From Unit 2, Lesson 14.)

5. There are 7 hedgehogs underground.
   There are 4 hedgehogs on the grass.
   How many fewer hedgehogs are on the grass?
   Show your thinking using drawings, numbers, or words.

   Write an equation to match the story problem.
   Draw a box around the answer.

   (From Unit 2, Lesson 15.)

6. **Exploration**

There are 8 stuffed animals on the bed.
There are 3 stuffed animals on the floor.
Your teacher asked a question about this story problem.
The answer to your teacher's question is 5.
What could be a question that your teacher asked?

_____

_____

_____

7. **Exploration**

Find 2 sets of objects at home or at school and write a story comparing them.

_____

_____

_____

_____

Solve your problem and write an equation that matches the story.

Section D: Practice Problems

1. There were 9 cars in the parking lot.
   Then 5 of the cars drove away.
   How many cars are in the parking lot now?
   Show your thinking using drawings, numbers, or words.
   Write an equation and draw a box around the answer.

   (From Unit 2, Lesson 17.)

2. There were 7 apples in the basket.
   Tyler added some more apples to the basket.
   Now there are 9 apples in the basket.
   How many apples did Tyler add to the basket?
   Select 2 equations that match the story.

   A. $7 + \boxed{} = 9$

   B. $7 + 9 = \boxed{}$

   C. $9 - 7 = \boxed{}$

   D. $16 - 9 = \boxed{}$

   (From Unit 2, Lesson 18.)

3. There were 9 chickens in the yard.
   Some of the chickens ran away.
   Now there are 5 chickens in the yard.
   How many chickens ran away?

   Write 2 equations that match the story problem.

   (From Unit 2, Lesson 19.)

4. Write a story problem with an answer of 7.

   _____

   _____

   _____

   _____

   (From Unit 2, Lesson 20.)

5. **Exploration**

There are 9 books on Han's desk and 5 books on Mai's desk.
Then Han puts 2 of his books on Mai's desk.
The answer to the question is 7.
What is the question?

_____

_____

_____

_____

6. **Exploration**

Write and solve your own story problem about something at your home.

_____

_____

_____

_____

Share your story with a partner and solve your partner's problem.

CK**Math**™
Core Knowledge **Mathematics**™

CKMath™
Core Knowledge MATHEMATICS™

A comprehensive program for mathematical skills and concepts
as specified in the *Core Knowledge Sequence*
(content and skill guidelines for Grades K–8).

Core Knowledge MATHEMATICS™
units at this level include:

Adding, Subtracting, and Working with Data
Addition and Subtraction Story Problems
Adding and Subtracting Within 20
Numbers to 99
Adding Within 100
Length Measurements Within 120 Units
Geometry and Time
Putting it All Together

www.coreknowledge.org

Core Knowledge Curriculum Series™