Grade K | Problem Solving Journal Answer Key

Module 1

Day 1

Create a "Get to Know Our Class" chart.

Student charts will vary.

Ask the students questions to gather data about the class and record the information on a chart. For example:
- How many students are in this class?
- How many students have brown eyes? (Blue eyes? Green eyes?)
- How many students in the class have black hair? (Brown hair? Blonde hair? Red hair?)

Day 2

Describe the class mathematically. Use tally marks to fill in the tables.

Student descriptions will vary.
- Remind students about yesterday's Problem of the Day.
- Generate a list of 3-5 things students want to know about each other. For example:
    - Favorite ice cream flavor, favorite color, number of siblings, number of pets, favorite subject in school, month of birth, favorite sport, etc.

Day 3

JiJi's cars - How many cars do I have? ____ Paco's cars - How many cars does Paco have? ____ How many cars should JiJi give to Paco so that they have the same number of cars?

- JiJi's cars: <u>4</u>. Paco's cars: <u>2</u>
- Number of cars to give to have the same number of cars: 1

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Day 4

I have _____ jelly beans. My friend has _____ jelly beans. Use these jelly beans to show how each friend could have the same amount. Draw a picture to show your thinking.

- I have <u>7</u> jelly beans. My friend has <u>3</u> jelly beans.
- Each friend can have 5 jelly beans each.

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Module 2

Day 1

JiJi had 4 fish for lunch. At dinner, JiJi ate 3 more fish. How many fish did JiJi eat altogether?

4 fish for lunch + 3 fish for dinner = 7 fish altogether

Day 2

There were 6 cookies on his plate and 2 cookies left in the bag. How many does he have altogether?

6 cookies on the plate + 2 cookies in the bag = 8 cookies altogether

Day 3

Juan had 10 toy cars in a box. Some were red, and some were blue. How many could be red, and how many can be blue? Color the cars to show two different ways he can have 10 toy cars.

Student answers may vary. Some ways are:

- 1 red and 9 blue
- 2 red and 8 blue
- 3 red and 7 blue
- 4 red and 6 blue
- 5 red and 5 blue

- 9 red and 1 blue
- 8 red and 2 blue
- 7 red and 3 blue
- 6 red and 4 blue

Look fors:
- *Students show understanding of coloring 10 squares with cars using 2 colors.*

Day 4 [Juan's Toy Cars from Day 3]

Write a number sentence for each toy car box you colored in the picture above.

Student answers may vary. Some answers:

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- 1 red + 9 blue = 10
- 2 red + 8 blue = 10
- 3 red + 7 blue + 10
- 9 red + 1 blue = 10
- 8 red + 2 blue = 10
- 7 red + 3 blue = 10

Module 3

Day 1
Scribbles had 7 pencils in her backpack. She gave her friend some pencils. She has 5 pencils left. How many pencils did she give her friend?

- Students should see the connection between subtraction and addition. Count from 5 to get to 7 or count from 7 to get to 2
- She gave her friend 2 pencils. 7 - 5 = 2

Day 2
Greg has 10 stickers. He put a 1-star sticker on his backpack and 3 heart stickers on his pencil box. How many stickers does he have left?

- Students should see the connection between subtraction and addition.
- 10 - 1 - 3 = 6. Greg has 6 stickers left.

Day 3
There are 7 birds in the tree. If 3 birds fly away, how many birds are left on the tree?
- 7 - 3 = 4. There are 4 birds left on the tree.

Day 4
Mio baked 8 cookies. She ate some and some were left on the tray. How many cookies did she eat?
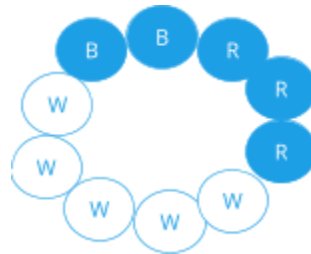
- 8 - 4 = 4 cookies

Module 4

Day 1
Draw a bracelet with 3 red beads and 2 blue beads. How many white beads will you need to add to make 10 beads? Draw the white beads.

5 white beads are needed to make 10.

Day 2
Show the alien spaceship all the ways to make seven.

- $0 + 7 = 7$ or $7 + 0 = 7$
- $1 + 6 = 7$ or $6 + 1 = 7$
- $2 + 5 = 7$ or $5 + 2 = 7$
- $3 + 4 = 7$ or $4 + 3 = 7$

Day 3
There are 8 cupcakes. Some have pink frosting, and some have yellow frosting. How many are pink, and how many are yellow?

Student answers will vary. Some variations include:
- 1 pink + 7 yellow
- 2 pink + 6 yellow
- 3 pink + 5 yellow
- 4 pink + 4 yellow
- 5 pink + 3 yellow
- 6 pink + 2 yellow
- 7 pink + 1 yellow

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Day 4

A farmer counts 10 feet. How many chickens and how many cows did the farmer count? Explain.

Student answers will vary.

Possible Student Solutions:

5 chickens	3 chickens	1 chicken
0 cows	1 cow	2 cows
2 + 2 + 2 + 2 + 2 = 10	2 + 2 + 2 + 4 = 10	2 + 4 + 4 = 10

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Module 5

Day 1
Solve the puzzles.

- 8 = 2 + 6
- 8 = 4 + 4
- 8 = 5 + 3

Day 2
Fishing Game. Circle two fish that make 9 points.

- 8 + 1 = 9
- 6 + 3 = 9
- 4 + 5 = 9