ST Math
Summer Immersion

Grade 1 | Problem Solving Journal Answer Key

Module 1

Day 1

Make a "Getting 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

Which creatures can wear 10 (red) shoes?

Student responses will vary. *Look for:*

- Students' understanding of how to make 10.
- snake and centipede
- one-eyed creature and school bus
- ostrich and octopus
- Robot and alien ship
- dog and ant

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- 2 stars

Day 4

FInd the missing number to complete the equation.

2 + **5** = 7

1 + 6 = 7

7 - **4** = 3

4 - 1 = 3

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Module 2

Day 1

How much does the pie monster want to eat?

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

Day 2

Complete the number bonds.

Some number bonds will vary.

- Row 1 - Number bond 15: 10 & 5
- Row 1 - Number bond 20: 1 & 19, 2 & 18, 3 & 17, 4 & 16, etc.
- Row 1 - Answers will vary depending on the number bonds chosen
- Row 2 - Number bond 12: 6 & 6
- Row 2 - Answers will vary depending on the number bonds chosen
- Row 2 - Number bond 13: 1 & 12, 2 & 11, 3 & 10, 4 & 7, etc.

Day 3

There are 17 pies. Determine how many cherry and strawberry pies there can be.

Student answers may vary. There are 9 pies that are not cherry. The number of cherry and strawberry pies can be:

- 9 apple, 1 cherry, 7 strawberry
- 9 apple, 2 cherry, 6 strawberry
- 9 apple, 3 cherry, 5 strawberry
- 9 apple, 4 cherry, 4 strawberry
- 9 apple, 4 cherry, 4 strawberry
- 9 apple, 5 cherry, 3 strawberry
- 9 apple, 6 cherry, 2 strawberry
- 9 apple, 7 cherry, 1 strawberry

Most of the pies are **apples**.

Day 4

There are 19 cars.

Student answers may vary. Some sample answers are:

- 18 (you) + 1 (your friend) = 19
- 17 (you) + 2 (your friend) = 19
- 16 (you) + 3 (your friend) = 19
- 15 (you) + 4 (your friend) = 19
- 14 (you) + 5 (your friend) = 19
- 13 (you) + 6 (your friend) = 19
- 12 (you) + 7 (your friend) = 19
- 11 (you) + 8 (your friend) = 19
- 10 (you) + 9 (your friend) = 19
- 9 (you) + 10 (your friend) = 19
- 8 (you) + 11 (your friend) = 19
- 7 (you) + 12 (your friend) = 19
- 6 (you) + 13 (your friend) = 19
- 5 (you) + 14 (your friend) = 19
- 4 (you) + 15 (your friend) = 19
- 3 (you) + 16 (your friend) = 19
- 2 (you) + 17 (your friend) = 19
- 1 (you) + 18 (your friend) = 19

Most of the pies are **apples**.

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Module 3

Day 1

How many critter blocks? Make a stack of 8 critter blocks (2 are already drawn for you). If 3 critter blocks fall off, how many will be left? If you put the 3 critter blocks back, plus 2 more, how many blocks tall is the stack?

- 6 more critters on top of the 2 already drawn.
- 5 will be remaining, if 3 fell off.
- The stack is 10 critters tall. (5 + 3 + 2 = 10)

Look fors:

- Students should demonstrate an understanding of addition and subtraction when finding the height of the critter stack.

Day 2

Make four different bracelets with 6 beads. Some beads are red and some beads are blue. Show the equation for each bracelet.

Student answers may vary. Some variations include:

- 5 blue + 1 red = 6
- 4 blue + 2 red = 6
- 3 blue + 3 red = 6
- 2 blue + 4 red = 6
- 1 blue + 5 red = 6

Day 3

Use the dice. Which dice make 7? Complete the equations.

Student answers may vary. Some variations include:

- 3 + 4 = 7

- 2 + 5 = 7
- 1 + 2 + 4 = 7

Day 4

Solve.

- 6 + 5 = **11**
- 5 + **3** = 11
- 7 - 1 = **6**
- 6 + 6 = **12**
- 4 + 3 + 2 = **9**

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Module 4

Day 1

Jiji is playing video games. How many points does JiJi have? _____

JiJi's Scores:

Level 1 = won 16 points
Level 2 = won 10 points
Level 3 = lost 4 points

- 16 + 10 - 4 = 22

Day 2

Color the critters to make an equation.

- Student answers may vary. Sample answers: 5 + 1, 4 + 2, 3 + 3, 2 + 4, 1 + 5 = 6
- Student answers may vary. Sample answers: 5 - 1 = 4, 4 - 2 = 2, 3 - 1 = 2, 2 - 2 = 0

Day 3

Given. Elephant = 11 | Dolphin = 8 | Snake = 15 | Turtle = 4

- Snake + Turtle = 15 + 4 = 19
- Elephant + **Dolphin** = 7 + 8 = 15
- Snake - Dolphin = 15 - 8 = 7

Day 4

Fishing Game

Which two fish would make 25? Which 3 fish would make 25?

Student answers may vary. Some combinations include:

2 Fish

- 12 + 13 = 25
- 15 + 10 = 25
- 18 + 7 = 25

3 Fish

- 13 + 2 + 10 = 25
- 18 + 2 + 5 = 25
- 8 + 7 + 10 = 25

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Module 5

Day 1

How long is the bar?

- 10 (yellow) + 6 (green) = 16 (purple)
- 10 (yellow) + 8 (green) = 18 (purple)
- 10 (yellow) + 3 (green) = 13 (purple)
- 10 (yellow) + 4 (green) = 14 (purple)

Day 2

Show me all the ways I can get 8 in two jumps.

- 1 and 7
- 2 and 6
- 3 and 5
- 4 and 8