

Grade 3 Problem Solving - Answer Key

Week 1

Problem of the Day

Create a class "Getting to Know our Class" Chart. Ask the students questions to gather data about the class and record the information.

Data gathered will vary. Student discussions will depend on the data.

Look for:

- Patterns in the data.
- Ways to organize the data.
- Mathematical comparisons that can be made.
- Conclusions that can be drawn from the data.

Math Writing Prompt (G3_Journal_W1_D1)

Have students complete the math writing prompt, "What do you hope to learn in this program?" **Student answers will vary.**

JiJi Cycle Basket Pre-Work

Does a number only have one location on a number line? Explain.

While a number can be written in equivalent forms, it has only one location on a number line. For example, the location of 7 remains the same on the number line whether it is written as 7, 1 + 6, 10 - 3, or any other equivalent form.

How many whole numbers would be found on a 0-5 number line? Explain.

There are 6 numbers on a number line that is labeled 0 - 5. Students might draw a number line to justify their thinking.



Emma and Maddie live on the same street 1 mile apart. They want to meet on the sidewalk halfway between their houses. Draw a model to show where Emma and Maddie would meet. Explain how you know it is halfway between their houses.

Students might draw a number line to show the houses with a meeting point halfway between the two houses.

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Problem of the Day (G3_POD_W1_D3)

Compare these fractions and explain how to locate them on a number line.

 $\frac{5}{8}, \frac{6}{8}, \frac{2}{8}, \frac{9}{8}, \frac{3}{8}$

Least to Greatest: $\frac{2}{8}$, $\frac{3}{8}$, $\frac{5}{8}$, $\frac{6}{8}$, $\frac{9}{8}$

Student explanations will vary.

Look for:

- The number line needs to represent values between 0 and 2 wholes.
- Each whole is partitioned into 8 equal parts.
- $\frac{9}{8}$ is $\frac{1}{8}$ greater than one whole.
- The numerator tells us the number of eighths to move on a number line starting from 0.

Math Writing Prompt (G3_Journal_W1_D3)

Compare counting whole numbers to counting unit fractions. How are they alike and how are they different?

Student explanations will vary.

Look for:

- When counting by unit fractions, the numerator changes like counting by whole numbers $\frac{1}{8}, \frac{2}{8}, \frac{3}{8}, \dots$ vs. 1, 2, 3...
- Unit fractions are counting pieces of a whole instead of wholes.
- Unit fractions can be regrouped to make a whole number.



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Problem of the Day (G3_POD_W1_D4)

Nancy, Bob, and Devin played a game to see who could get farthest on a number line. They each

rolled a fraction cube. Nancy rolled $\frac{1}{4}$ and 1. Bob rolled $\frac{3}{4}$ and $\frac{3}{4}$ Devin rolled $\frac{3}{4}$ and $\frac{1}{2}$.

Where did each player land on the number line? Who won?

Nancy and Devin landed at $1\frac{1}{4}$. Bob landed at $1\frac{1}{2}$. Bob won.



Math Writing Prompt (G3_Journal_W1_D4)

Explain why a JiJi cycle with $\frac{1}{3}$ fraction circles and a JiJi cycle with $\frac{1}{4}$ fraction circles could both land on the same location on a number line and label it 1.

Student explanations will vary.

Look for:

- Three JiJi cycles with $\frac{1}{3}$ fraction circles will make 1.
- Four Jiji cycles with $\frac{1}{4}$ fraction circles will make 1.



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Small Group Activity (G3_WordProblem_W1_D5)

• **Word Problem** - Oh no! Some fractions fell off the number line and JiJi needs to put them back on! Create a number line for JiJi with the following fractions in the correct location so with the

