# PUZZLE TALK
Extensions

These activities extend the puzzles and the concepts learned in the puzzles throughout the week. The activities might be tasks, word problems, journal writing activities, or hands-on activities designed to deepen student understanding and help students make connections.

Some of the activities listed below work well in a remote environment and can be easily added to your virtual classroom. The activities that can be used remotely are designated as such.
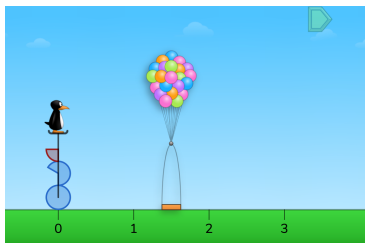
- Give students a whiteboard and dry erase marker. Display a puzzle in Level 5 that has blue pieces that are greater than 1.
- Say to students, "What do you notice in this puzzle? Can you represent the blue pieces as both a fraction and mixed number?"
- Share students' thinking. Then ask students, "Is this an addition or subtraction situation? How do you know? How could you represent this puzzle with an equation?"
- Have students write the puzzle as an equation and solve the equation.
- Try a student's solution and watch the feedback. Repeat with other puzzles in Level 5.

- Pose the following problem to students:
  - Mrs. Luca asked her students to solve the problem 1/3 + 1/3. Oliver said the answer was 2/6. Do you agree or disagree? Prove your position.
- Have students work with a partner or small group to solve the problem. As students share their solutions, discuss the role of the numerator and denominator and why the denominator doesn't change in this problem. ***(Can be used remotely)***

- Pose the following problem to students:
  - Maya had a whole candy bar in her lunch box. She gave ¼ of the candy bar to her friend Matilda. She gave 2/4 of the candy bar to her friend Winston. How much of the candy bar did Maya have left to eat? Explain.
- Have students work with a partner or small group to solve the problem. As students share their solutions, discuss their strategy for solving the problem.
- Discuss the role of the numerator and denominator and why the denominator doesn't change in this problem. ***(Can be used remotely)***

- Ask students if they have ever seen the game show Jeopardy. Explain that in Jeopardy the answer is given and the contestants have to determine the question (e.g., The answer is "one of two equal parts". The question is "What is one half?").
- Display the fraction 4/4 and say to students, "If this is the answer, what could the question be?"
- Have students record their thinking on their whiteboard. Share different student's solutions and prove that each solution would have 4/4 as an answer. Display different fraction addition and subtraction equations (with common denominators) and repeat.

- **If you are using Puzzle Talks as part of your remote learning plan,** it is important to think about how to maximize the learning in the virtual environment. One strategy might be to do Pre-Work. Pre-Work encourages students to think about the concept prior to the Puzzle Talk.

Name: _____   Date: _____

Mrs. Luca asked her students to solve the problem $\frac{1}{3} + \frac{1}{3}$. Oliver said the answer was $\frac{2}{6}$. Do you agree or disagree? Prove your position.

Name: _____   Date: _____

Maya had a whole candy bar in her lunch box. She gave $\frac{1}{4}$ of the candy bar to her friend Matilda. She gave $\frac{2}{4}$ of the candy bar to her friend Winston. How much of the candy bar did Maya have left to eat? Explain.

Name:_____   Date:_____

Is $\frac{1}{2}$ of a king size candy bar plus $\frac{1}{2}$ of a snack size candy bar equal to 1 whole candy bar? Why or why not? Explain.

In the equation $\frac{3}{4} + \frac{1}{4} = \frac{4}{4}$, why does the denominator stay the same but the numerator does not?

Eric broke his piece of paper into 4 equal parts. He gave $\frac{1}{4}$ of the paper to his friend Ben and $\frac{1}{4}$ of the paper to his friend Sam. How much paper did Eric have left for himself? Explain.