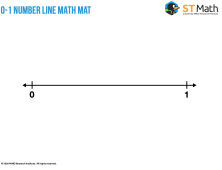
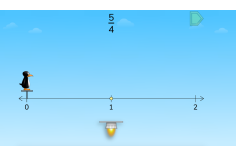
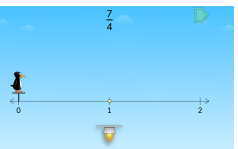
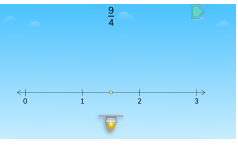
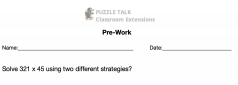


These activities extend the puzzles and the concepts learned in the puzzles throughout the week. The activities might be tasks, word problems, journal writing activities, or hands-on activities designed to deepen student understanding and help students make connections.

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.

	<ul style="list-style-type: none"> • Give students a 0-1 Number Line Math Mat and a dry erase marker. Show a denominator of 3 and ask students to partition the number line to match the denominator. Remind students that the denominator tells how many equal parts the whole has been divided into. • Ask students, “The denominator for this fraction is 3 so we divided the whole on this number line into 3 equal parts. How many of these equal parts does it take to make a whole?” • Count the thirds together starting at 0 on the number line. Count out loud and label the fractions as you count to one (e.g., 1 one third, 2 one thirds, 3 one thirds). • Say to students, “We are now at 1 whole. How many one thirds did it take? How could we write this as a fraction?” Display the fraction $\frac{3}{3}$. Say to students, “We counted 3 one thirds in the whole so we wrote $\frac{3}{3}$. What do you notice about this fraction?” • Repeat with other denominators. Prove that when the numerator and denominator are the same number, the fraction equals 1.
	<ul style="list-style-type: none"> • Give students a whiteboard and dry erase marker. Display the first puzzle in Level 4 that has a fraction greater than 1. Ask students to draw a 0-2 number line like the one in the puzzle on their whiteboard. • Say to students, “What do you notice about this fraction? What does it mean when the numerator is greater than the denominator? Where do you think this fraction would be placed on this number line? Why?” Have students Think, Pair, Share their ideas with a partner. • Share students’ solutions and thinking. Partition the number line to match the denominator and then count fraction pieces until you reach the fraction in the puzzle. Remind students that fractions, like numbers, go on forever. Fractions do not stop at 1. Repeat with other puzzles in Level 4.
	<ul style="list-style-type: none"> • Display a 0 – 2 number line and partition the number line into fourths. Ask students, “How many one fourths are needed to make 1 whole?” Count and label the fourths together starting at 0. When you reach $\frac{4}{4}$, say to students, “It takes 4 one fourths to make 1 whole. • How many one fourths does it take to make 2?” Count and label the fourths until you reach $\frac{8}{4}$. Say to students, “It takes 8 one fourths to make 2. What do you notice about the fraction $\frac{8}{2}$?” Discuss with students that when the numerator is greater than the denominator we know the fraction is greater than 1. Tell students that you are going to display a puzzle and they need to put their thumb up if the fraction in the sky is greater than 1 or put their thumb down if the fraction is less than 1 or put their thumb sideways if the fraction is equal to 1. • Display the puzzles in Level 4. Don’t solve the puzzles, just have students identify if the fraction is greater than, less than or equal to 1. Have a few students share their thinking for each puzzle.
	<ul style="list-style-type: none"> • Give students a whiteboard and dry erase marker. Display the first puzzle in Level 5. Ask students to draw a 0-3 number line on their whiteboard like the one shown in the puzzle. Ask students, “How should we partition the number line? How do you know?” • Use the denominator to divide the number line into equal parts. Then ask students, “How many of these equal pieces do we need?” Use the numerator to count out the correct number of equal pieces. Practice counting the fraction pieces as you move along the number line. • Ask students, “Is this fraction greater than, less than, or equal to 1? How do you know?” Repeat with the other puzzles in Level 5.
	<ul style="list-style-type: none"> • 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.



PUZZLE TALK
Extensions
Pre-Work

Name: _____

Date: _____

How does the denominator help you to partition a number line to place a fraction? Explain.

Can a fraction be greater than 1? How do you know?

Todd's teacher asked him to draw a 0 – 3 number line and place the fractions $\frac{1}{4}$, $\frac{5}{4}$, and $\frac{12}{4}$ on the number line. What does Todd's completed number line look like?