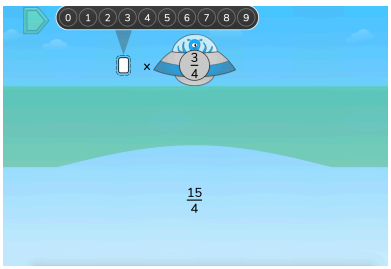
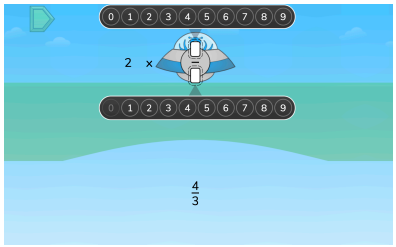
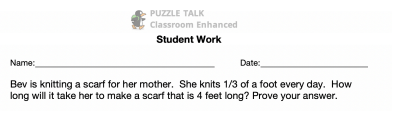
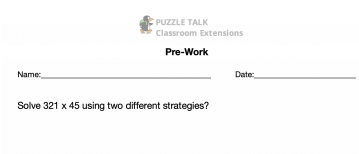
PUZZLE TALK Extensions

Fourth Grade | **Fraction Multiplication** | **Alien Bridge Symbolic**

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, dry erase marker, and fraction tools, such as Cuisenaire rods, number lines, fraction strips, etc. • Display the first puzzle in Level 4. Ask students what is unknown in this puzzle compared to the other puzzles we have solved. Say to students, "Now we don't know how many groups we have. We know the size of the groups and the total number. • Work with a neighbor to solve this puzzle and find the missing whole number." Have students use their fraction tools to work together to solve the puzzle. • Share student's strategies and solutions. Repeat with the remaining puzzles in Level 4.
	• Give students a whiteboard, dry erase marker, and fraction tools, such as Cuisenaire rods, number lines, fraction strips, etc. • Display the first puzzle in Level 5. Ask students what is unknown in this puzzle compared to the other puzzles we have solved. Say to students, "Now we don't know the size of our group. WE know how many groups we have and the total number. • Work with a neighbor to solve this puzzle and find the missing whole number." Have students use their fraction tools to work together to solve the puzzle. Share student's strategies and solutions. • Ask students, "How did you know what denominator to choose? Why does the denominator stay the same when we multiply?" Repeat with the remaining puzzles in Level 5.
	• Give students a whiteboard, dry erase marker, and fraction tools, such as Cuisenaire rods, number lines, fraction strips, etc. • Display a fraction repeated addition sentence (e.g., 2/4 + 2/4 + 2/4 + 2/4 + 2/4). Ask students to write the corresponding multiplication sentence (e.g., 5 x 2/4) and solve the problem. • Ask students to draw a picture and solve the repeated addition sentence. • Repeat with other fraction repeated addition sentences.
	• Pose the following problem to students: ○ Bev is knitting a scarf for her mother. She knits 1/3 of a foot every day. How long will it take her to make a scarf that is 4 feet long? Prove your answer. • Have students work with a partner and use their fraction tools to help them solve the problem. • Share students' solutions and strategies. (***Can be done remotely)***
	• **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.

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PUZZLE TALK
Extensions

Student Work

Name:_____ Date:_____

Bev is knitting a scarf for her mother. She knits 1/3 of a foot every day. How long will it take her to make a scarf that is 4 feet long? Prove your answer.

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PUZZLE TALK
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Pre-Work

Name:_____ Date:_____

Why does the denominator not change when you add two fractions with the same denominator?

How many different ways can you represent the problem 4 x 5?

Elaine has 6 flower vases. She filled each vase with ¾ cup of water. How much water did Elaine use to fill her vases? Explain.

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