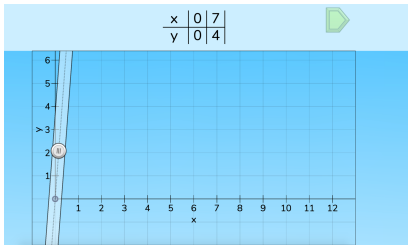
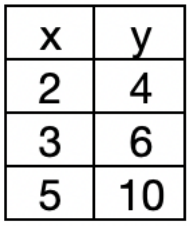
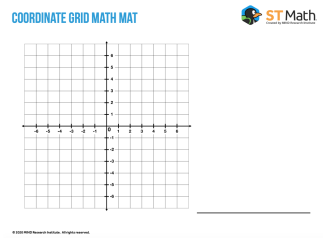
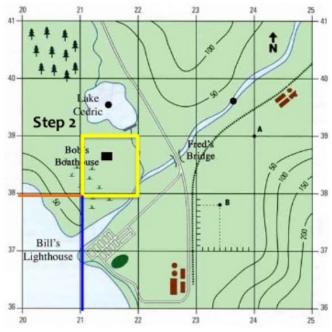
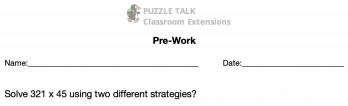
PUZZLE TALK
Extensions

Fifth Grade	Coordinate Plane Extended	Line Capture from Table

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 whiteboards and dry erase markers. Display a puzzle from Level 1. • Ask students to copy the table they see in the puzzle. Have students extend the table by two more coordinate pairs that they see on the grid and explain how they know those points would fall on the line. • Then ask students to add two more coordinate pairs that would NOT be visible on the grid but that would fall on the line. • Have students share their thinking and prove the points would fall on the line.
	• Have students create a table that could be used to graph a line on the coordinate plane. • Have students exchange their table with a partner. Each students uses their partner's table to graph the line on the coordinate grid. • Share students' work and check for accuracy. Ask students to then add another coordinate pair that is not in the table but would fall on the line they drew.
	• Give each student a quadrant one coordinate grid. • Say to students, "I wonder what the line looks like if the x-axis and y-axis have the same values (e.g., (4,4) or (3,3)". • Have students draw a line on a coordinate grid that would show the x-axis and y-axis values the same. Discuss what students see. • Then ask students, "What coordinate pairs would give us a horizontal line?" Let students explore and share their findings.
	• Collect or print out maps with grids from local spots (e.g., the zoo, an amusement park, the city limits, etc.). • Ask students, "How can reading a coordinate grid help us in real life?" • Explain to students that maps often have grids to help people locate places. Let them know some maps use a coordinate pair with an (x,y) value and some maps may use a letter and then a number (e.g., (H,2). • Show students the grid on the map and ask students to first find the coordinate pair and name things located within it (e.g., What zoo exhibit is located in (G,5)?). • Then ask students to choose locations on the map and name the spot with a coordinate pair. Share students' coordinate pairs and see if the other students can locate that spot on the map.
	• **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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Pre-Work

Name:_____ Date:_____

How could you explain what happens when you skip count by 2 (e.g., 2, 4, 6, 8, 10, etc.) or by 7 (e.g., 7, 14, 21, 28, 35, etc.)?

Could you start skip counting by 5 at the number 8 or do you have to start with 5? Explain.

What number comes next in this pattern: 19, 22, 25, 28, 31, ___, ____? How do you know?