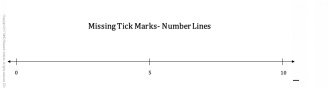
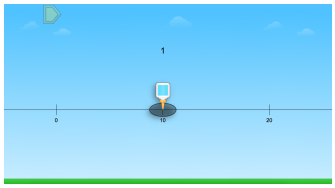
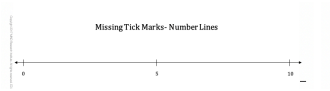
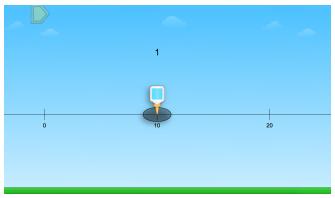
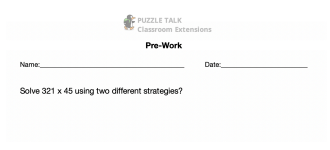
PUZZLE TALK
Extensions

First Grade | **Introduction to the Number Line** | **Missing Tick Marks**

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.

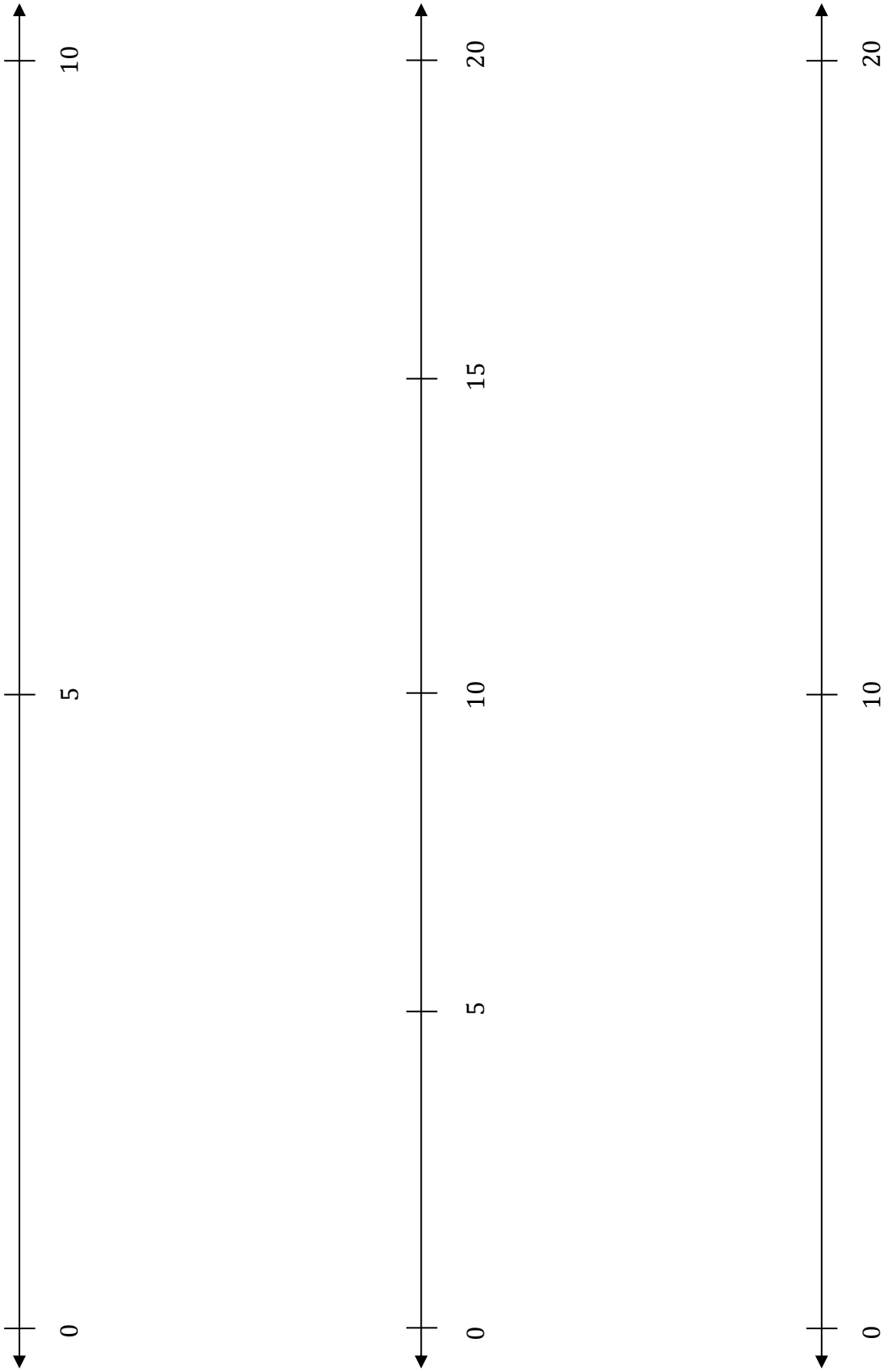
Some of the activities listed below work well in a remote environment and can be easily added to your virtual classroom. The activities that can be used remotely are designated as such.

	• Create a 0 – 10 number line on the floor with string or tape and label the numbers 0 and 10. Write the numbers 1-9 on sticky notes (or notecards) and give the numbers to different students. • Ask a student to come up and place their number on the number line. • Once the number is placed, discuss as a class whether they think the number is placed correctly and why or why not. • Repeat with other numbers. Move previously placed numbers as needed. • Focus the discussion on the attributes of a number line: numbers are evenly spaced, increase as you go right, decrease as you go left, etc.
	• Display a puzzle from Level 4. Give students a matching number line with 0, 10, and 20 labeled with no tick marks in between. • Say to students, "A student in the other class said that it's easy to place the number 5 on this number line because they know exactly where it goes. Do you agree? Turn and talk to a neighbor about how you know where to place 5 on this number line and why." • Share students' thinking and focus the discussion on the relationship between 5 and 10. Explain to students that because 5 + 5 = 10, 5 would be in the middle of 0 and 10. Have them label 5 on their number line. • Then say to students, "Using this same thinking, where would the number 15 go on this number line?" Share students thinking and place the 15 in the middle of 10 and 15. • Look at the displayed puzzle and say to students, "Put your finger at the spot on your number line you think the number in the sky should be placed." Repeat with the remaining puzzles in Level 4.
	• Display different open number lines for students. Have students add the whole number tick marks to a number line with a few numbers labeled. • Have students share their strategies for placing the numbers based on the tick marks that are labeled.
	• Display a puzzle from each level. As you work through the levels, ask students, "What is the first number that is labeled on each of these number lines?" Then say to students, "Does a number line have to begin with 0? Why or why not?" • Have students work with a partner to determine their answer. Share students' thinking as a whole class. Focus the discussion on the attributes of a number line- numbers are evenly spaced, increase as you go right, decrease as you go left, etc. • Display a number line that begins at a number other than 0 and prove that the number line still has the required attributes. • Then display a number line that does not begin at 0 and has missing numbers. Have students place the missing numbers on the number line and explain their strategy.
	• **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

Student Work Mat

Missing Tick Marks- Number Lines



PUZZLE TALK
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Pre-Work

Name:_____ Date:_____

Does counting have to start at the number 1? Why or why not?

Does a number line have to label every number? Why or why not?

Kim wanted to find the total value of the coins in her pocket. She has 1 quarter and 4 pennies. Kim said, "I know the quarter is 25 cents so I'm going to start counting at 25 and count by 1's to add my pennies." Finish Kim's counting: 25, __, __, __, __,.