

Math: Grade 4, Lesson 4, Addition with Tape Diagrams

Lesson Objective: Addition with tape diagrams

Practice Focus: Multi-Digit Whole Number Addition with tape diagrams

TN Standard: 4.NBT.B.4


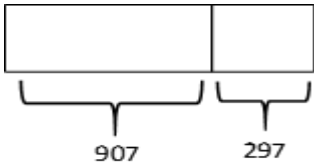
Teacher Video Materials:

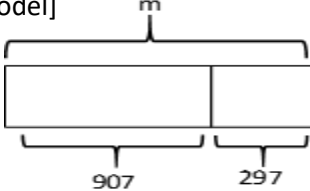
- White board and markers

Student Materials:

- paper and a pencil
- the student packet for Math, Grade 4, Lesson 4 which can be found at www.tn.gov/education

Teacher Do	Student Do
<p><u>Opening</u> Hello! Welcome to Tennessee's At Home Learning Series for math! Today's lessons is for all our 4th graders out there, though all children are welcome to tune in. This lesson is the fourth in our series on this topic.</p> <p>My name is ____ and I'm a ____ grade teacher in Tennessee schools! I'm so excited to be your teacher for this lessons. Welcome to my virtual classroom!</p> <p>If you didn't see our previous lesson, you can find it at www.tn.gov/education. You can still tune in to today's lesson if you haven't see any of our others. But, it might be more fun if you first go back and watch our other lessons since we'll be talking about things we learned previously.</p> <p>Today we will be learning about adding multi-digit whole numbers using a tape diagram. Before we get started, to participate fully in our lesson today you will need:</p> <ul style="list-style-type: none"> • paper and a pencil • the student packet for Math, Grade 4, Lesson 4 which can be found at www.tn.gov/education <p>Ok, let's begin!</p>	<p>Students get materials ready for the lesson.</p>
<p><u>Intro</u> Today we are going to practice addition with multi-digit whole numbers using a tape diagram.</p> <p>[Write $345+200$]</p> <p>Say the numbers in unit form. (Pause) That's right, 3 hundreds, 4 tens and 5 ones plus 2 hundreds.</p> <p>Think about a strategy to add these numbers. (Pause)</p> <p>For this problem, we can add the hundreds, 300 plus 200, then add the tens and ones, plus 4 tens, plus 5 ones equals</p>	<p>Students think of a strategy</p>

<p>545</p> <p>Repeat the process and sequence for: $345+400$, $345+450$, $345+457$ [Pause and give students time to add these three problems]</p> <p>Answers: 745, 795, 802</p>	<p>Students work these three problems.</p>
<p><u>Teacher Model</u></p> <p>We are going to solve a math problem about a family road trip. The Lane family took a road trip. During the first week, they drove 907 miles. The second week they drove the same amount as the first week plus an additional 297 miles. How many total miles did they drive during the second week?</p> <p>What information do you know? [Pause for students to think, then answer]</p> <p>That's right, we know they drove a total of 907 miles the first week.</p> <p>We also know they drove 297 more miles during the second week than the first week.</p> <p>What is the unknown information? [Pause for students to think, then answer]</p> <p>Good Job! We do not know the total miles they drove in the second week.</p> <p>A tape diagram represents parts that can be combined to make a total amount. We can draw a tape diagram to represent the amount of miles driven in the first week, 907 miles. [Model like below]</p>  <p>Since the Lane family drove an additional 297 miles in the second week, we can extend the bar for 297 more miles. [Model like below]</p> 	<p>Students respond</p> <p>Students respond</p>

<p>We use a bracket and label the unknown with the variable m for miles. [Model]</p>  <p>Now, what does this tape diagram represent? [Pause] That's right, it represents the information we need to add together to find the total miles driven.</p> <p>How can you solve for m? [Pause] That's right, we need to add the numbers together. [Pause – Model adding the numbers]</p> <p>So, what is m? [Pause] Yes, $m = 1,204$</p> <p>Write a statement that tells your answer. Remember, this problem is about a family road trip.</p> <p>[Write: The Lane family drove 1,204 miles during the second week.]</p>	<p>Students respond</p> <p>Students respond</p> <p>Students respond</p> <p>Students write</p>
<p>Guided Practice</p> <p>Here is a problem we will do together. The office supply closet had 25,473 large paperclips, 13,648 medium paperclips, and 15,306 small paperclips. How many total paperclips were in the closet?</p> <p>What information do you know? [Pause for students to think, then answer]</p> <p>That's right, we know how many large, medium and small paperclips are in the closet.</p> <p>What is the unknown information? [Pause for students to think, then answer]</p> <p>Exactly! We are trying to find out how many total paper clips are in the closet. We need to add all three of these numbers together.</p> <p>Try to draw a tape diagram to represent this. [Pause, then show your work for drawing a diagram]</p> <p>There is more than one way to find the total number of paperclips. We could stack and add three numbers together,</p>	<p>Students respond</p> <p>Students respond</p> <p>Students draw</p>

<p>or add two of the values, then add the third to that sum. Try a strategy that makes sense to you!</p> <p>[Pause and allow the student to think, then model two different ways to find the sum.]</p> <p>What did you come up with? [Pause]</p> <p>Right, there are 54,427 paperclips in the closet.</p>	
<p><u>Independent Practice</u></p> <p>You sure did a great job! We worked really hard together to use tape diagrams to help us with whole number addition After the video, you will have some problems to practice on your own. Good luck and do your best! Thank you for doing math with me today!</p>	
<p><u>Closing</u></p> <p>I enjoyed learning about math with you today! Thank you for inviting me into your home. I look forward to seeing you in our next lesson in Tennessee's At Home Learning series.</p> <p>Bye!</p>	

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