PBS Lesson Series

Math: Grade 5, Lesson 4, *Subtract Fractions*

Lesson Objective: The students will subtract fractions.
Practice Focus: Subtract fractions with unlike units using the strategy of creating equivalent fractions
TN Standards: 5.NF.A.1
Teacher Materials:

- Paper
- Pens/markers/pencils

Student Materials:

- Paper and a pencil, and a surface to write on
- Student Practice Packet for Math, Grade 5, Lesson 4 which can be found at www.tn.gov/education

Teacher Do	Student Do
Opening **Hello! Welcome to Tennessee's At Home Learning Series for math! Today's lesson is for all our 5th graders out there, though all children are welcome to tune in. This lesson is the fourth in our series.** **My name is ____ and I'm a ____ grade teacher in Tennessee schools! I'm so excited to be your teacher for this lesson! Welcome to my virtual classroom!** **Today we will subtract fractions with unlike units using the strategy of creating equivalent fractions** **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.** **Before we get started, to participate fully in our lesson today, you will need:** • Paper and a pencil, and a surface to write on • Student Practice Packet for Math, Grade 5, Lesson 4 which can be found at www.tn.gov/education **Ok, let's begin!**	Student gets paper and a pencil.

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<u>Intro</u> **We have been adding fractions. Today we are going to talk about subtracting fractions. This process is very similar, so grab some paper and a pencil and let's get started!**	Student gets paper and a pencil.
<u>Teacher Model</u> **Let's recall that in order to add fractions with unlike denominators (the bottom number in the fraction), we must first create equivalent fractions so that the denominators are the same. This is also true for subtraction. We can use our rectangle models to subtract. Are you ready to get started?** [pause] [Write Problem 1] **1/2 – 1/3** [See figure one for the model] **We will need to change both units**. **I'll draw one fraction model and partition it into 2 equal units. Then I'll write ½ below one part and shade it to make it easier to see what ½ is after I change the units.** **On the second fraction model, I'll make thirds with horizontal lines and write 1/3 next to it after shading it.** **Now, let's make equivalent units. How many new units do we have?** [Pause] **6 units** **1/2 is how many sixths?** [Pause] 1**/2 is 3/6** **1/3 is how many sixths?** [Pause] **1/3 is 2/6** **1/2 -1/3 = 3/6 – 2/6** **3/6 – 2/6 = 1/6** [Write Problem 2] **1/3 – 1/4** [See figure two for the model] **To create like units, we can do exactly as we did when adding. We have to make smaller units. First, we draw parts in one direction. Then we partition in the other direction to find the units. The only thing we have to remember is that we are subtracting the units, not adding.**	Student writes the problem and draws the rectangles along with the teacher. Student notices there are now 6 units. Student subtracts. Student writes the problem and the model with the teacher.

What is our new smaller unit or common denominator? [Pause] **Twelfths** **1/3 is….4/12** **1/4 is…3/12** [Write: 1/3 – 1/4 = 4/12 – 3/12 Cross out three of the four twelfths.] **So, 4/12 – 3/12 is 1/12** **Ready for another one? You try this one on your own first.**	Student notices that there are now 12 units. Student subtracts.
<u>Guided Practice</u> [Write] **2/3 – 1/4** [See figure three for the model] [Give the student time to work each step before you go over it.] **First we draw parts in one direction. Then we draw partitions in the other directions.** **How many units do we have now?** [Pause] **12** **2/3 is how many twelfths?** [Pause] **2/3 is 8/12** **1/4 is how many twelfths?** [Pause] **1/4 is 3/12** **2/3 – 1/4 = 8/12 – 3/12 = 5/12**	Student draws the rectangles. Student notices that there are 12 units. Student subtracts.
<u>Independent Practice</u> **Today we have practiced subtracting fractions with unlike units. You sure did a great job! After the video, you will have some problems to practice on your own. Good luck and do your best!**	
<u>Closing</u> **I enjoyed learning about fractions 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! Bye!**	

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Figure one

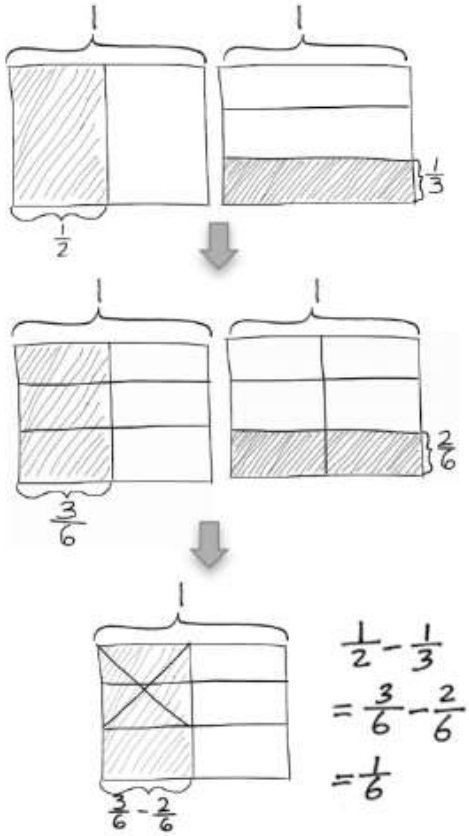


Figure two

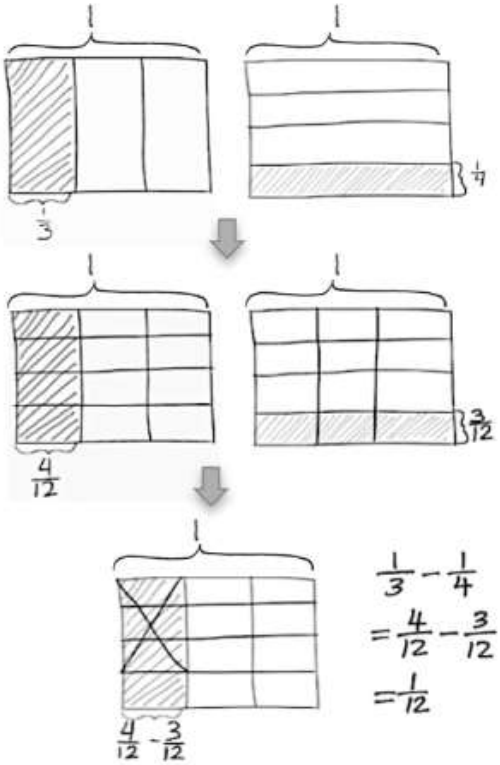
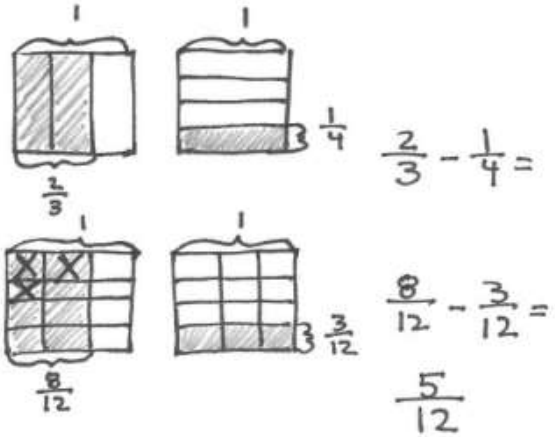


Figure three



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