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| **5.NF.7****Creating Stories** |
| **Domain** | **Number and Operations - Fractions** |
| **Cluster** | **Apply and extend previous understandings of multiplication and division to multiply and divide fractions.**  |
| **Standard(s)** | **NC.5.NF.7** Solve one-step word problems involving division of unit fractions by non-zero whole numbers and division of whole numbers by unit fractions using area and length models, and equations to represent the problem. |
| **Materials** | Task handout |
| **Task** | **Creating Stories**In class, Sarah and Tony are talking about the difference between “$\frac{1}{3}$ *times* 4” compared to “$\frac{1}{3}$ *divided* by 4.” Their teacher asks them to draw a model and to write a story problem for each expression. What would Sarah and Tony’s work look like? Write an equation to represent both problems. Write a sentence explaining how the models are different.  |

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| **Rubric** |
| **Level I****Not Yet** | 1. **Level II**
2. **Progressing**
 | **Level III****Meets Expectations** |
| * Student is not yet able to draw a model and write a story problem for each expression.
 | Student completes at least three of the following bullets:* Draw a model to represent $\frac{1}{3}x 4$.

* Draw a model to represent $\frac{1}{3} ÷4. $

* Write a story problem to represent $\frac{1}{3}x 4$.

Example: *A chef made 4 trays of brownies for a party.* $\frac{1}{3}$ *of the 4 trays were left after the end of the party. How many trays of brownies are left?** Write a story problem to represent $\frac{1}{3} ÷4. $ Example: *After a party,* $\frac{1}{3}$ *of a tray of brownies was leftover. 4 children shared the leftover brownies equally. How much of a tray of brownies did each child eat?*
* Record equation for the multiplication situation: $\frac{1}{3}x 4=1\frac{1}{3}$
* Record equation for the division situation $\frac{1}{3} ÷4=\frac{1}{12}$
* Student writes a sentence to explain how the two models are different.
 | Student independently completes all of the following bullets:* Draw a model to represent $\frac{1}{3}x 4$.

* Draw a model to represent $\frac{1}{3} ÷4. $

* Write a story problem to represent $\frac{1}{3}x 4$. Example: *A chef made 4 trays of brownies for a party.* $\frac{1}{3}$ *of the 4 trays were left after the end of the party. How many trays of brownies are left?*
* Write a story problem to represent $\frac{1}{3} ÷4. $ Example: *After a party,* $\frac{1}{3}$ *of a tray of brownies was leftover. 4 children shared the leftover brownies equally. How much of a tray of brownies did each child eat?*
* Record equation for the multiplication situation: $\frac{1}{3}x 4=1\frac{1}{3}$
* Record equation for the division situation $\frac{1}{3} ÷4=\frac{1}{12}$
* Student writes a sentence to explain how the two models are different.
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| **Standards for Mathematical Practice** |
| **1. Makes sense and perseveres in solving problems.** |
| **2. Reasons abstractly and quantitatively.** |
| 3. Constructs viable arguments and critiques the reasoning of others. |
| **4. Models with mathematics.** |
| 5. Uses appropriate tools strategically. |
| 6. Attends to precision. |
| **7. Looks for and makes use of structure.** |
| 8. Looks for and expresses regularity in repeated reasoning. |

**Creating Stories**

In class, Sarah and Tony are talking about the difference between “$\frac{1}{3}$ *times* 4” compared to “$\frac{1}{3}$ *divided* by 4.”

Their teacher asks them to draw a picture and to write a story problem for each expression.

What would Sarah and Tony’s work look like? Write an equation to represent both problems.

Write a sentence explaining how the models are different.