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| **Art Murals – 6.NS.1** |
| **Domain** | **The Number System** |
| **Cluster** | **Apply and extend previous understandings of multiplication and division to divided fractions by fractions.** |
| **Standard(s)** | **6.NS.1** Interpret and compute quotients of fractions, and solve word problems involving division of fractions by fractions, e.g., by using visual fraction models and equations to represent the problem. For example, create a story context for (2/3) ÷ (3/4) and use a visual fraction model to show the quotient; use the relationship between multiplication and division to explain that (2/3) ÷ (3/4) = 8/9 because 3/4 of 8/9 is 2/3. (In general, (a/b) ÷ (c/d) = ad/bc.) How much chocolate will each person get if 3 people share 1/2 lb of chocolate equally? How many 3/4-cup servings are in 2/3 of a cup of yogurt? How wide is a rectangular strip of land with length 3/4 mi and area 1/2 square mi?. |
| **Materials** | Activity sheet, square tiles (optional)  |
| **Task** | **Art Murals**Part 1: A rectangular mural on the wall by the school office has an area of 1/2 of a square yard. If the length of the mural is 3/4 of a yard what is the width?Part 2:The mural is going to be covered with smaller square pictures that will tile the entire mural. If each smaller square is 1/12 of a yard by 1/12 of a yard, how many small squares cover the entire mural? Draw a picture and write an equation to show your answer.Part 3:Write an explanation about you solved each part of the task.  |

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| **Rubric** |
| **Level I** | 1. **Level II**
 | **Level III** |
| * Student uses inappropriate solution strategy and does not get the correct answer.
 | 1. Not Yet Proficient
* There are one or two errors.
 | Proficient in Performance * Accurately solves problem
* Part 1: The width is 1/2 divided by 3/4 which is 2/3 of a yard.
* Part 2: The area of the mural is 1/2 of a square yard. The area of each square is 1/144 of a square yard. 1/2 divided by 1/144 is 72 squares. If students draw it out they will see they can fit 9 squares along the length and 8 squares along the width creating a 9 by 8 array. That array includes 72 squares.
* Part 3: The explanation is clear and accurate.
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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.** |

**Art Murals**

Part 1:

A rectangular mural on the wall by the school office has an area of 1/2 of a square yard. If the length of the mural is 3/4 of a yard what is the width?

Part 2:

The mural is going to be covered with smaller square pictures that will tile the entire mural. If each smaller square is 1/12 of a yard by 1/12 of a yard, how many small squares cover the entire mural? Draw a picture and write an equation to show your answer.

Part 3:

Write an explanation about you solved each part of the task.