Unit 3 STUDY GUIDE

Name: \_\_\_\_\_

**5.NF.3**: Interpret a fraction as division of N by D, solve word problems by using models OR equations, convert improper fractions to mixed numbers.

### **Convert:**

**1.** 
$$\frac{38}{4}$$
 = **2.**  $\frac{67}{7}$  =

**3.** 
$$\frac{16}{3}$$
 = **4.**  $\frac{46}{9}$  =

# 5. If four people wanted to equally share a box of 13 Snickers bars, how many would each person get? SHOW YOUR WORK!

5.NF.4a: Use diagrams to model fractions multiplied by whole numbers, fractions by fractions, tell a story

6. Draw an area model to show 
$$\frac{1}{3} \cdot \frac{5}{6}$$
 and then solve.

7. Tell a story about my apple orchard using this equation  $\frac{2}{7} \cdot 3$  and then solve (hint: use a box to show how many whole acres).

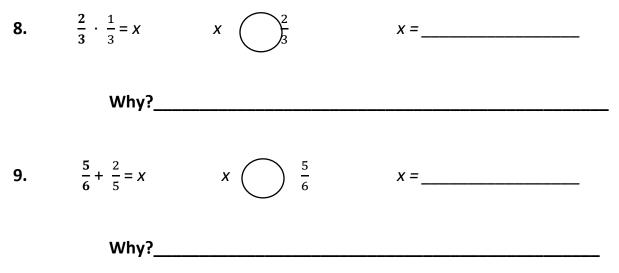
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5.NF.5a: Predict if the product will be greater or less than factor WITHOUT solving.

**5.NF.5b**: Explain why multiplying a number by another number greater than one gives an answer greater than what you started with. Explain why multiplying a number by another number less than one gives an answer less than what you started with.

### 1<sup>st</sup>: Predict if the sum or product will be greater than (>) or less than (<) the first factor.

2<sup>nd</sup>: Explain why the answer is greater than or less than the first factor.



5.NF.6: Solve word problems involving multiplication of fractions using models OR equations.

10. After a party, we had  $1\frac{7}{8}$  pizzas left. The next day, we ate  $\frac{4}{5}$  of the pizza for lunch. How much of the pizza did we eat?

11. Elijah makes pancakes at the diner.  $\frac{15}{21}$  of his pancakes are blueberry. Of those blueberry pancakes,  $\frac{2}{5}$  also have chocolate chips. What fraction of his pancakes have blueberries and chocolate chips?

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5.NF.1: Add and subtract fractions with unlike denominators.

**5.NF.4a**: Use diagrams to model fractions multiplied by whole numbers, fractions by fractions, tell a story.

#### 12. Complete the following fraction box:

	$\frac{1}{2}$ and $\frac{7}{9}$
>	
5.NF.1	
+	
5.NF.1	
-	
5.NF.1	
X	
5.NF.4a	

5.NF.7c: Solve word problems involving division of fractions using models AND equations.

# 13. Joy is cutting boards into fourths. She has 9 boards. How many fourths will she have?

14. A pencil box has an area of 10 square inches and a width of  $\frac{7}{8}$  inches. What is its length?

Draw the pencil box and label what you know. Include an equation to show your work.

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15. I bought  $\frac{9}{10}$  pounds of dog food. I divided it into three bags. One for Fido, Fetch, and Freddy. How much did each dog get?

5.NF.4b: Find the area of rectangle with fractional lengths.

# 16. A table has a length of $\frac{6}{7}$ feet and a width of $\frac{5}{8}$ feet. What is its area?

17. Trevor built a desk for his computer. Its top measures  $3\frac{2}{7}$  feet by  $1\frac{1}{3}$  feet. What is the area of the top of the desk?

**5.NF.7a**: Divide a fraction by a whole number. **5.NF.7b**: Divide a whole number by a fraction. Prove with multiplication.

# Solve (prove with multiplication):

- **18**.  $\frac{1}{9} \div 3 =$  **22**.  $12 \div \frac{1}{4} =$
- **19**.  $\frac{1}{4} \div 7 =$  **23**.  $5 \div 12 =$
- **20.**  $\frac{1}{12} \div 6 =$  **24.** How many  $\frac{1}{3}$ s are in 7 wholes? Write division and multiplication to show.

**21**. 7 ÷ 
$$\frac{1}{5}$$
 =