Estimating Quotients

Fractions

Name: _____ Date: _____ Grade 6

1. Select all the expressions whose value is greater than 1.

- ☐ **A.** $3 \div \frac{1}{2}$
- ☐ **B.** $\frac{1}{2} \div 3$
- ☐ **C.** $\frac{2}{3} \div \frac{1}{4}$
- ☐ **D.** $\frac{5}{4} \div 2$
- ☐ **E.** $2 \div \frac{4}{5}$

2. Owen ordered a 4-foot sandwich for a party. He cuts it into $\frac{2}{3}$-foot servings. Owen says the sandwich is long enough to feed 8 people. Is Owen correct? Explain your thinking.

Problems 3–4: Think about the expression $2 \div \frac{3}{4}$.

3. Is the value of the expression less than 1, greater than 1, or exactly 1?

Less than 1 **Greater than 1** **Exactly 1**

4. Calculate the value of the expression. Draw a diagram if it helps. _____

Problems 5–6: Think about the expression $\frac{2}{3} \div \frac{5}{6}$.

5. Is the value of the expression less than 1, greater than 1, or exactly 1?

Less than 1 **Greater than 1** **Exactly 1**

6. Calculate the value of the expression. _____

7. **Calculate $\frac{1}{4} \div \frac{3}{2}$.** _____

8. **Calculate $\frac{3}{2} \div \frac{1}{4}$.** _____

9. **How are Problems 7 and 8 alike? How do their answers compare? Why do you think this is the case?**

10. **Noah describes how to draw a diagram to calculate $\frac{5}{2} \div \frac{1}{2}$.**

> **Noah's Response**
>
> Draw a tape diagram that is $\frac{5}{2}$ long. Mark it into halves. There are 5 halves in $\frac{5}{2}$, so $\frac{5}{2} \div \frac{1}{2} = 5$.

Did Noah correctly describe how to draw the diagram and find the value? Explain your thinking.