Name Key Period _____

4.8 Guided Notes (Divide Fractions)

Dividing Fractions:

- Remember: Keep, change, Flip!
- To divide by a fraction, multiply by the reciprocal (multiplicative inverse).

Practice:

1. $\frac{7}{8} \div \frac{3}{4} = \frac{7}{8} \cdot \frac{4}{3} = \frac{28}{24} = \frac{7}{6} = 1\frac{1}{6}$

2. $\frac{1}{3} \div 5 = \frac{1}{3} \cdot \frac{1}{5} = \frac{1}{15}$

3. $\frac{3}{4} \div \left(-\frac{1}{2}\right) = \frac{3}{4} \cdot \left(\frac{-2}{1}\right) = \frac{-6}{4} = \frac{-3}{2} = -1\frac{1}{2}$

4. $\frac{3}{4} \div \frac{1}{4} = \frac{3}{4} \cdot \frac{4}{1} = 3$

5. $-\frac{4}{5} \div \frac{8}{9} = -\frac{4}{5} \cdot \frac{9}{8} = \frac{-36}{40} = \frac{-9}{10}$

6. $-\frac{5}{6} \div \left(-\frac{2}{3}\right) = -\frac{5}{6} \cdot \left(-\frac{3}{2}\right) = \frac{15}{12} = \frac{5}{4} = 1\frac{1}{4}$

Divide Mixed Numbers:

- To divide mixed numbers, first change mixed numbers into Improper fractions.
- Then, multiply by the reciprocal.

Practice:

7. $\frac{2}{3} \div 3\frac{1}{3} = \frac{2}{3} \div \frac{10}{3} = \frac{2}{3} \cdot \frac{3}{10} = \boxed{\frac{1}{5}}$

8. $5 \div 1\frac{1}{3} = 5 \div \frac{4}{3} = 5 \cdot \frac{3}{4} = \frac{15}{4} = \boxed{3\frac{3}{4}}$

9. $-\frac{3}{4} \div 1\frac{1}{2} = -\frac{3}{4} \div \frac{3}{2} = -\frac{3}{4} \cdot \frac{2}{3} = \boxed{-\frac{1}{2}}$

10. $2\frac{1}{3} \div 5 = \frac{7}{3} \div 5 = \frac{7}{3} \cdot \frac{1}{5} = \boxed{\frac{7}{15}}$

11. The side pieces of a butterfly house are $8\frac{1}{4}$ inches long. How many side pieces can be cut from a board measuring $49\frac{1}{2}$ inches long?

$49\frac{1}{2} \div 8\frac{1}{4} = \frac{99}{2} \div \frac{33}{4}$

$= \frac{99}{2} \cdot \frac{4}{33} = \boxed{6}$ pieces