

Warm Up!

- 1.) Write in agenda book
- 2.) Place homework on desk
- 3.) Write the mixed numbers as improper fractions.

Oct 10-9:39 AM

Lesson 4-2: Dividing Fractions

Learning Target: I can divide fractions.

Oct 10-10:27 AM

Reciprocals are two numbers whose product is 1.
 We can use reciprocals to divide fractions.
 Examples: Find the reciprocal of each number below.

$\frac{9}{2}$ $\frac{2}{9}$ $\frac{1}{8}$ 8 5 $\frac{1}{5}$

Reflect

- 1.) Is any number its own reciprocal? 1
- 2.) Does every number have a reciprocal? Explain.
- 3.) The reciprocal of a whole number is a fraction with 1 in the numerator.

Oct 10-10:28 AM

Steps for Dividing Fractions

- 1.) Keep the first fraction the same.
- 2.) Change the division sign to a multiplication sign.
- 3.) Flip the second fraction by finding the reciprocal
- 4.) Cross simplify if possible.
- 5.) Multiply the fractions.
- 6.) Simplify if possible.

The saying we use to remember how to divide fractions is
 "KEEP CHANGE FLIP"

Oct 10-10:29 AM

Example 1: Divide $\frac{5}{9} \div \frac{2}{3}$

Keep
Change
Flip

$$\frac{5}{9} \times \frac{3}{2} = \frac{5}{6}$$

Handwritten work shows the original problem $\frac{5}{9} \div \frac{2}{3}$ with a '1.' above the divisor. The divisor $\frac{2}{3}$ is crossed out and replaced with $\frac{3}{2}$. The final answer $\frac{5}{6}$ is circled.

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Example 2: $\frac{9}{10} \div \frac{3}{5}$

$$\frac{9}{10} \times \frac{5}{3} = \frac{3}{2} = \frac{1}{2}$$

Handwritten work shows the original problem $\frac{9}{10} \div \frac{3}{5}$ with a '1.' above the divisor. The divisor $\frac{3}{5}$ is crossed out and replaced with $\frac{5}{3}$. The final answer $\frac{1}{2}$ is circled.

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Example 3: Allison has $\frac{1}{2}$ cup of yogurt for making fruit parfaits. Each parfait requires $\frac{1}{8}$ cup of yogurt. How many parfaits can she make?

$$\frac{1}{2} \div \frac{1}{8}$$

$$\frac{1}{2} \times \frac{8}{1} = 4 \text{ parfaits}$$

Handwritten work shows the original problem $\frac{1}{2} \div \frac{1}{8}$ with a '4.' above the divisor. The divisor $\frac{1}{8}$ is crossed out and replaced with $\frac{8}{1}$. The final answer '4 parfaits' is circled.

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① $\frac{3}{8} \div \frac{3}{10}$ ② $\frac{7}{12} \div \frac{1}{8}$ ③ $\frac{1}{2} \div \frac{1}{6}$

Three division problems are written in orange ink.

Oct 9-8:57 AM

H.O.T. FOCUS ON HIGHER ORDER THINKING

Justify Reasoning When Kaitlin divided a fraction by $\frac{1}{2}$, the result was a mixed number. Was the original fraction less than or greater than $\frac{1}{2}$? Explain your reasoning.

Communicate Mathematical Ideas The reciprocal of a fraction less than 1 is always a fraction greater than 1. Why is this?

Oct 10-10:34 AM

$8 \div 2 = 4$ and $8 * \frac{1}{2} = 4$

Explain why the above two expressions have the same result.

Oct 8-10:22 AM