

Lesson 6-2

Reinforce Understanding

Division Expressions with Fractions and Mixed Numbers

I can divide a fraction by a fraction and divide with mixed numbers by multiplying by the reciprocal.

Worked model

A pitcher holds $\frac{8}{9}$ liter of lemonade. Each glass takes $\frac{2}{9}$ liter. How many glasses can be filled?

1. Write the division. $\frac{8}{9} \div \frac{2}{9}$
2. Keep, Change, Flip. Keep $\frac{8}{9}$, change $\div$ to $\times$, flip the divisor to $\frac{9}{2}$
3. Multiply across. $\frac{8}{9} \times \frac{9}{2} = \frac{72}{18}$
4. Simplify. $\frac{72}{18} = 4$ glasses

Answer: The pitcher fills 4 glasses that each hold $\frac{2}{9}$ liter.

Practice

Complete each exercise. Show the reasoning that supports your answer.

1. Sort each division: will the quotient be GREATER than 1 or LESS than 1?

Write the name of the correct group on each line.

Groups: Quotient Greater Than 1 Quotient Less Than 1

- _____ $\frac{3}{4} \div \frac{1}{4}$
- _____ $\frac{5}{6} \div \frac{1}{3}$
- _____ $\frac{2}{3} \div \frac{1}{6}$
- _____ $\frac{1}{4} \div \frac{1}{2}$
- _____ $\frac{1}{3} \div \frac{2}{3}$
- _____ $\frac{2}{5} \div \frac{4}{5}$

2. What is $\frac{1}{2} \div \frac{1}{4}$?

Circle the letter of the best answer. Show how you know.

- A. $\frac{1}{8}$
- B. $\frac{1}{2}$
- C. 2
- D. 4

Show your work

3. What is $\frac{3}{4} \div \frac{1}{8}$?

Circle the letter of the best answer. Show how you know.

- A. $\frac{3}{32}$
- B. 6
- C. $\frac{8}{3}$
- D. 24

Show your work
