Dividing Mixed Numbers

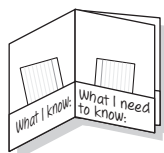## MAIN IDEA
- Divide mixed numbers.

EXAMPLE Divide by a Mixed Number

1 Find $6\frac{1}{4} \div 2\frac{1}{2}$.

Estimate $6 \div 3 = 2$

$6\frac{1}{4} \div 2\frac{1}{2} = \boxed{} \div \boxed{}$ Write mixed numbers as improper fractions.

$= \boxed{} \times \boxed{}$ Multiply by the reciprocal.

$= \dfrac{\overset{5}{\cancel{25}}}{\underset{2}{\cancel{4}}} \times \dfrac{\overset{1}{\cancel{2}}}{\underset{1}{\cancel{5}}}$ Divide by the GCFs.

$= \boxed{}$ or $\boxed{}$ Simplify.

Check for Reasonableness $2\frac{1}{2} \approx 2$

FOLDABLES

ORGANIZE IT
Record what you learn about expressing mixed numbers as improper fractions before dividing on the note cards in your Foldable. As you learn the concepts, move the note cards from the Need to Know pocket to the Know pocket in your Foldable.

What I know: What I need to know:

EXAMPLE Evaluate Expressions

2 **ALGEBRA** Find $f \div g$ if $f = 2\frac{5}{8}$ and $g = \frac{2}{3}$.

$f \div g = \boxed{} \div \boxed{}$ Replace f with $2\frac{5}{8}$ and g with $\frac{2}{3}$.

$= \boxed{} \div \boxed{}$ Write the mixed number as an improper fraction.

$= \boxed{} \times \boxed{}$ Multiply by the reciprocal.

$= \boxed{}$ or $\boxed{}$ Simplify.

Check Your Progress

a. Find $3\frac{3}{4} \div 2\frac{1}{2}$.

b. ALGEBRA Find $a \div b$ if $a = 3\frac{3}{4}$ and $b = \frac{5}{8}$.

EXAMPLE

3 **ADVENTURE RACING** A team took $3\frac{3}{4}$ days to complete 180 miles of an adventure race consisting of hiking, biking, and river rafting. How many miles did they average each day?

Estimate $180 \div 4 = 45$

$180 \div 3\frac{3}{4} = 180 \div \boxed{}$ Write the mixed number as an improper fraction.

$= \dfrac{180}{1} \times \boxed{}$ Multiply by the reciprocal.

$= \dfrac{\overset{12}{\cancel{180}}}{1} \times \dfrac{4}{\underset{1}{\cancel{15}}}$ Divide 180 and 15 by the GCF, 15.

$= \boxed{}$ or $\boxed{}$ Simplify. Compare to the estimate.

So, the team averaged $\boxed{}$ miles each day.

REMEMBER IT
Be sure you express your answers with the correct units.

Check Your Progress **DRIVING** Mario took $4\frac{1}{3}$ days to travel a distance of 260 miles. How many miles did he average each day?

HOMEWORK ASSIGNMENT
Page(s):
Exercises: