

## Dividing with Mixed Numbers

When you are dividing with mixed numbers,

- change each mixed number to an improper fraction
- invert the divisor; then multiply the fractions

**EXAMPLE 1**  $3\frac{1}{4} \div \frac{1}{2} =$

$$\begin{array}{l} 3\frac{1}{4} \div \frac{1}{2} = \frac{13}{4} \div \frac{1}{2} \\ \quad \quad \quad \downarrow \text{Invert} \\ \quad \quad \quad \frac{1}{2} \\ \quad \quad \quad \uparrow \text{Change} \\ = \frac{13}{\cancel{4}_2} \times \frac{\cancel{2}^1}{1} \\ = \frac{13}{2} \\ = 6\frac{1}{2} \end{array}$$

**EXAMPLE 2**  $2\frac{3}{8} \div 4 =$

$$\begin{array}{l} 2\frac{3}{8} \div 4 = \frac{19}{8} \div \frac{4}{1} \\ \quad \quad \quad \downarrow \text{Invert} \\ \quad \quad \quad \frac{4}{1} \\ \quad \quad \quad \uparrow \text{Change} \\ = \frac{19}{8} \times \frac{1}{4} \\ = \frac{19}{32} \end{array}$$

**EXAMPLE 3**  $1\frac{1}{3} \div 2\frac{1}{2} =$

$$\begin{array}{l} 1\frac{1}{3} \div 2\frac{1}{2} = \frac{4}{3} \div \frac{5}{2} \\ \quad \quad \quad \downarrow \text{Invert} \\ \quad \quad \quad \frac{5}{2} \\ \quad \quad \quad \uparrow \text{Change} \\ = \frac{4}{3} \times \frac{2}{5} \\ = \frac{8}{15} \end{array}$$

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**Divide. Simplify your answers.**

6.  $1\frac{2}{5} \div \frac{1}{2} =$

$2\frac{3}{4} \div \frac{2}{3} =$

$\frac{3}{4} \div 1\frac{3}{8} =$

$\frac{3}{5} \div 3\frac{1}{2} =$

7.  $3\frac{1}{2} \div 3 =$

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

$2\frac{5}{8} \div 2 =$

$4\frac{2}{3} \div 5 =$

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

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

$2\frac{1}{4} \div 3\frac{3}{8} =$

$6\frac{3}{4} \div 2\frac{3}{8} =$

9.  $\frac{7}{8} \div 2 =$

$2\frac{3}{4} \div 2 =$

$3 \div 4\frac{1}{2} =$

$4\frac{2}{3} \div 2\frac{1}{12} =$