

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

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

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

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

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

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

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

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

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

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