

Notes on

Multiplying and Dividing

Fractions and Mixed Numbers

Multiplying fractions and mixed numbers:

1. Convert all mixed numbers and whole numbers to improper fractions.
2. Multiply the numerators together.
3. Multiply the denominators together.
4. Simplify the answer, as needed.

Dividing fractions and mixed numbers:

1. Convert all mixed numbers and whole numbers to improper fractions.
2. **Keep** the first fraction the same.
3. **Change** the division sign to a multiplication sign.
4. **Flip** the second fraction.
5. Multiply the fractions as usual (top times top, bottom times bottom)
6. Simplify the answer, as needed.

Examples:

$$2\frac{1}{2} \times 3\frac{2}{3} = \frac{5}{2} \times \frac{11}{3} = \frac{55}{6} = 9\frac{1}{6}$$

$$4\frac{1}{3} \div 2\frac{3}{5} = \frac{13}{3} \div \frac{13}{5} = \frac{13}{3} \times \frac{5}{13} = \frac{65}{39} = \frac{65 \div 13}{39 \div 13} = \frac{5}{3} = 1\frac{2}{3}$$

