

Chapter 8 Sixth Grade

Multiplying Fractions and Mixed Numbers

Multiplying Fractions

1. No need to worry about LCM or LCD.
2. Make whole number into a fraction by writing a 1 under it. Example: $15 = \frac{15}{1}$
3. Always try to simplify before multiplying. Look for factors to cancel. Any factor that appears on the top and bottom may be cancelled.
4. Remember to check for simplest form and improper fractions when done.

Multiply Fractions

1. Simplify FIRST: look for any common factors top-to-bottom.

$$\frac{5}{8} \times \frac{4}{5} \rightarrow \frac{\overset{1}{\cancel{5}}}{\underset{4 \times 2}{\cancel{8}}} \times \frac{\overset{1}{\cancel{4}}}{\underset{5}{\cancel{5}}} = \frac{1}{2}$$

2. Multiply numerators.
3. Multiply denominators

* Remember: to make a whole number into a fraction, just put a 1 under it.

Estimating Products

With 2 Mixed Numbers:

1. Round each to the nearest whole number.
2. Multiply

With a Fraction and a Mixed Number:

1. Count by the denominator of the fraction.
2. Choose a compatible number closest to the mixed number.
3. Multiply

If that doesn't work: use common sense rounding and estimating

Multiplying Mixed Numbers

1. Rewrite the mixed numbers as improper fractions (use the circle method).
2. Now just multiply the fractions like before:
 1. Try to simplify
 2. Multiply numerators.
 3. Multiply denominators.
3. Return improper fractions to mixed numbers if necessary.

Divide Fractions

1. Change \div to \times .
2. Flip the divisor. (reciprocal)

$$\frac{5}{8} \div \frac{3}{4} \rightarrow \frac{5}{\cancel{8}} \times \frac{\overset{1}{\cancel{4}}}{3} = \frac{5}{6}$$

3. Simplify if possible.
4. Multiply numerator then denominators.

* Remember: to make a whole number into a fraction, just put a 1 under it.