Multiply With Mixed Numbers

To multiply mixed numbers, rename each mixed numbers into improper fractions. Multiply and simplify.

Multiply Mixed Numbers

1) Solve
\[ \frac{1}{2} \times \frac{22}{5} \]

\[ \frac{11}{5} \times 2 \]

\[ \frac{22}{5} \]

2) Write steps.
- Mixed # to improper fraction
- Check for cross reduce
- \( \frac{N \times N}{D \times D} \)
- Reduce
- Answer

Try These:

\( \frac{1}{4} \times \frac{8}{9} \)

\[ \frac{1}{4} \]

\[ \frac{76}{36} \]

\[ \frac{2}{3} \]

\[ = \frac{2}{3} \]

\[ \frac{4}{23} \]

2) Write steps.
- Mixed # to improper fraction
- Check for cross reduce
- \( \frac{N \times N}{D \times D} \)
- Reduce
- Answer

\( \frac{1}{3} + \frac{1}{3} + \frac{1}{3} = \frac{3}{3} = 1 \)

\( \frac{3}{3} \times \frac{3}{3} + \frac{3}{3} = \frac{3}{3} = 1 \)

\( \frac{3}{6} + \frac{3}{6} + \frac{3}{6} = \frac{9}{6} = \frac{1}{2} \)
Multiply Fractions Review

In each of the problems below, show the representation of the problem:

1) \( \frac{4}{5} \times \frac{2}{3} \)  
2) \( \frac{1}{2} \times \frac{5}{6} \)  
3) \( \frac{3}{4} \times \frac{1}{3} \)

Identifying Expressions

In each of the models below, write the expression that is being represented.

4) \( \frac{4}{5} \cdot \frac{3}{4} = \frac{12}{20} = \frac{3}{5} \)

5) 

6) 

7)
Multiply and simplify each problem.

<table>
<thead>
<tr>
<th>Problem 1</th>
<th>Problem 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5\frac{2}{6} \times 2\frac{1}{4})</td>
<td>(4\frac{3}{6} \times 5\frac{1}{8})</td>
</tr>
<tr>
<td>(1\frac{3}{6} \times 3\frac{2}{5})</td>
<td>(2\frac{5}{9} \times 8\frac{8}{9})</td>
</tr>
<tr>
<td>(6\frac{5}{6} \times 4\frac{3}{4})</td>
<td>(4\frac{3}{9} \times 7\frac{2}{4})</td>
</tr>
</tbody>
</table>
Steps

1. Change mixed # to improper
   \[ \frac{12 + \frac{3}{4}}{2 \times \frac{1}{4}} = \frac{15}{12} \]

2. Multiple fractions
   \[ \frac{N \times N}{D \times D} \]

3. Change back to mixed # & Reduce Fraction
\[ \frac{1}{x^1} \times \frac{22}{11} = \frac{11}{5} \]
twelve thousand one hundred forty-six and five hundred sixty-seven thousandths
\[3 \times 10^4\]

\[30000 + \frac{2000}{40} = 30040\]

\[1.2 \times 10^4\]

\[12000 + \frac{30000}{42000} = 13000\]
\[ \frac{16}{36} = \frac{4}{9} \]

\[ 16 \div 4 = 4, \quad 36 \div 4 = 9 \]

\[ \frac{16}{36} = \frac{0.444}{2.18} \approx 0.76 \]

\[ 4.2 \]
\[
\frac{12}{\div 6} = \frac{2}{\div 2} = \frac{1}{3}
\]
\[
\frac{36}{\div 6} = \frac{6}{\div 2} = \frac{3}{3}
\]
\[
\frac{12}{\div 3} = \frac{4}{\div 2} = \frac{2}{3}
\]
\[
\frac{36}{\div 3} = \frac{12}{\div 2} = \frac{6}{3}
\]
\[
\begin{align*}
16 \div 2 & \quad 8 \\
\hline
42 \div 2 & \quad 21
\end{align*}
\]

16 \Rightarrow 1, 2, 4, 8, 16

42 \Rightarrow 1, 2, 3, 6, 7, 14, 21, 42
\[ \frac{16}{8} = \frac{2}{3} \]

\[ \frac{24}{8} \]

16 \rightarrow 24 \rightarrow 48 \rightarrow 16

24 \rightarrow 48 \rightarrow 12, 24