Decimals and Fractions

Lesson 4-4

Why? To compare numbers, you sometimes need to convert between fraction form and decimal form.

Write 0.27 as a fraction.
The place value of the digit farthest to the right is hundredths, so 0.27 is 27 hundredths.

\[ 0.27 = \frac{27}{100} \]

Write \( \frac{3}{8} \) as a decimal.
Divide 3 by 8 to convert \( \frac{3}{8} \) to a decimal.

\[ \begin{align*}
0.375 \\
8 \longdiv{3.000} \\
\frac{3}{8} = 0.375
\end{align*} \]

Equivalent Fractions

Lessons 4-5

Why? In order to work with fractions with unlike denominators, you need to know how to write them as equivalent fractions with like denominators.

<table>
<thead>
<tr>
<th>Equivalent fractions</th>
<th>Find the missing number that makes the fractions equivalent.</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \frac{2}{3} = \frac{4}{6} )</td>
<td>( \frac{3}{4} = \frac{15}{20} )</td>
</tr>
<tr>
<td>( \frac{4}{5} = \frac{16}{20} )</td>
<td>( \frac{4 \times 4}{5} = \frac{16}{20} )</td>
</tr>
</tbody>
</table>

Mixed Numbers and Improper Fractions

Lesson 4-6

Why? To operate with fractions, you sometimes need to convert between mixed numbers and improper fractions.

Convert the improper fraction \( \frac{11}{4} \) to a mixed number:

\[ \begin{align*}
\text{Divide the numerator by the denominator.} \\
\text{The remainder becomes the numerator,} \\
\text{and the divisor remains the denominator.}
\end{align*} \]

\[ \frac{11}{4} = 2 \frac{3}{4} \]

From a mixed number to an improper fraction:

\[ \frac{2 \frac{3}{4}}{4} = \frac{4 	imes 2 + 3}{4} = \frac{11}{4} \]