Lowest Common Denominator

METHOD 1 – Prime Factoring

Find the LCD for the following fractions:

\[
\begin{array}{cc}
\frac{1}{12} & \frac{1}{15} \\
\end{array}
\]

- Find the prime factors for each denominator.

\[
\begin{array}{cc}
12 & 15 \\
2 \times 6 & 3 \times 5 \\
2 \times 3 & \\
\end{array}
\]

- List the factors in chart form.
- Bring factors down, and then multiply.

\[
\begin{array}{cccc}
2 & 2 & 3 & 5 \\
12 & 2 & 2 & 3 \\
15 & & 3 & 5 \\
\end{array}
\]

\[2 \times 2 \times 3 \times 5 = 60\]

- The LCD is 60

METHOD 2 – Least Common Multiple

Find the LCD for the following fractions:

\[
\begin{array}{cc}
\frac{1}{12} & \frac{1}{15} \\
\end{array}
\]

- List the multiples of each denominator.
  - 12, 24, 36, 48, 60, 72, .........
  - 15, 30, 45, 60, 75, .........

- Choose the smallest multiple that is common to both denominators.
- The LCD is 60

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