

Determine Common Denominators

Find the common factors of $\frac{1}{4}$ and $\frac{3}{8}$.

STEP 1: List the multiples of both denominators.

$$4: 4, 8, 12, 16, 20, 24$$

$$8: 8, 16, 24, 32, 40$$

STEP 2: Find the Least Common Multiple (LCM) of both numbers.

$$\text{The LCM of 4 and 8 is: 8}$$

STEP 3: Set up your fractions to help you determine the common denominators

$$\frac{1}{4} = \frac{?}{8}$$

$$\frac{3}{8} = \frac{?}{8}$$

To find the common denominators:

Divide the denominator of the first fraction by the denominator of the second fraction: $8 \div 4 = 2$. Next you multiply 4 by the numerator 1, $4 \times 1 = 4$. So the new fraction is $\frac{4}{8}$.

$$\frac{1}{4} = \frac{4}{8}$$

$$\frac{3}{8} = \frac{3}{8}$$

Repeat the steps: $8 \div 8 = 1$, $1 \times 3 = 3$. So the new fraction is $\frac{3}{8}$.

$$\frac{1}{4} = \frac{4}{8}$$

$$\frac{3}{8} = \frac{3}{8}$$

So, the fractions with common denominators are $\frac{4}{8}$ and $\frac{3}{8}$.