



SKILL 13: Writing Fractions with the Least Common Denominator

The **least common denominator (LCD)** of two or more fractions is the number that is the LCM of their denominators.

Once you have found the least common denominator, write equivalent fractions with this denominator.

Example

Find the least common denominator for $\frac{5}{8}$ and $\frac{1}{12}$. Then write an equivalent fraction for each, using the least common denominator.

The denominators are 8 and 12.

Multiples of 8: 8, 16, 24, 32, 40

Multiples of 12: 12, 24, 36, 48

The LCM of 8 and 12 is 24.

Write an equivalent fraction of $\frac{5}{8}$ and $\frac{1}{12}$, using 24 as the denominator.

Since $8 \times 3 = 24$, multiply 5 by 3 to obtain the numerator.

Since $12 \times 2 = 24$, multiply 1 by 2 to obtain the numerator.

$$\frac{5}{8} = \frac{5 \times 3}{8 \times 3} = \frac{15}{24}$$

$$\frac{1}{12} = \frac{1 \times 2}{12 \times 2} = \frac{2}{24}$$

So, using the LCD of 24, $\frac{5}{8} = \frac{15}{24}$ and $\frac{1}{12} = \frac{2}{24}$.

Guided Practice

1. Write $\frac{1}{3}$ and $\frac{3}{4}$ as equivalent fractions with the least common denominator.

a. What is the LCM for 3 and 4? _____

b. By what number will you multiply the numerator and denominator of $\frac{1}{3}$? _____

c. $\frac{1 \times \square}{3 \times \square} = \frac{\square}{\square}$

d. By what number will you multiply the numerator and denominator of $\frac{3}{4}$? _____

e. $\frac{3 \times \square}{4 \times \square} = \frac{\square}{\square}$

2. Write $\frac{1}{2}$ and $\frac{1}{3}$ as equivalent fractions with the least common denominator.

SKILL 13: Practice

Find the LCM for each pair of numbers.

1. 4, 5 _____ 2. 6, 9 _____ 3. 8, 10 _____ 4. 6, 8 _____
 5. 9, 12 _____ 6. 4, 8 _____ 7. 6, 7 _____ 8. 5, 10 _____

Find the least common denominator for each pair of fractions. Then write an equivalent fraction for each, using the least common denominator.

9. $\frac{3}{5}, \frac{1}{2}$ 10. $\frac{1}{6}, \frac{4}{7}$ 11. $\frac{3}{4}, \frac{3}{8}$
 LCD: _____ LCD: _____ LCD: _____

Write an equivalent fraction for each, using the least common denominator.

12. $\frac{7}{9}, \frac{1}{6}$ 13. $\frac{1}{2}, \frac{9}{10}$ 14. $\frac{5}{8}, \frac{3}{7}$

 15. $\frac{5}{9}, \frac{3}{10}$ 16. $\frac{4}{7}, \frac{1}{2}$ 17. $\frac{3}{8}, \frac{3}{5}$

 18. $\frac{5}{12}, \frac{5}{6}$ 19. $\frac{1}{4}, \frac{7}{8}$ 20. $\frac{2}{5}, \frac{2}{7}$

 21. $\frac{11}{15}, \frac{3}{5}$ 22. $\frac{5}{12}, \frac{7}{16}$ 23. $\frac{13}{18}, \frac{17}{24}$

24. Keri keeps her computer CDs on two shelves. One shelf is $\frac{3}{4}$ full. The other is $\frac{5}{6}$ full. Write an equivalent fraction for each, using the least common denominator. _____



25. What is the least common denominator for $\frac{5}{6}$ and $\frac{3}{8}$?

- A 48 C 12
 B 24 D 16

Skill 13

26. Which is the simplest form?

- F $\frac{10}{12}$ H $\frac{9}{14}$
 G $\frac{4}{6}$ J $\frac{7}{21}$

Skill 12