

Finding Common Denominators

Grade 5 Math • Section 4.1

Name: _____	Date: _____	Score: _____ / 14
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Quick Review and Helpful Hints

- ✚ **Common denominator:** A shared multiple of two or more denominators. The **least common denominator (LCD)** is the **least common multiple (LCM)** of the denominators.
- ✚ **Finding the LCD:** List multiples of each denominator until you find the smallest one they share. LCD of 4 and 6: multiples of 4: 4, 8, 12, ...; multiples of 6: 6, 12, ... ⇒ LCD = 12.
- 💡 Rewrite each fraction with the LCD as the new denominator.

🔍 **Example:** Find the LCD of $\frac{2}{3}$ and $\frac{5}{8}$, then rewrite both fractions.

✚ Multiples of 3: 3, 6, 9, 12, 15, 18, 21, 24. Multiples of 8: 8, 16, 24. LCD = 24. $\frac{2}{3} = \frac{16}{24}$ and $\frac{5}{8} = \frac{15}{24}$.

💡 **Answer:** LCD = 24; $\frac{16}{24}$ and $\frac{15}{24}$

✚ **Practice Problems**

Find the LCD and rewrite each pair of fractions with that denominator.

- | | |
|---|--|
| 1. $\frac{1}{4}$ and $\frac{1}{6}$ LCD = _____ | 7. $\frac{7}{12}$ and $\frac{5}{8}$ LCD = _____ |
| 2. $\frac{2}{3}$ and $\frac{3}{5}$ LCD = _____ | 8. $\frac{1}{6}$ and $\frac{4}{9}$ LCD = _____ |
| 3. $\frac{3}{8}$ and $\frac{1}{6}$ LCD = _____ | 9. $\frac{3}{7}$ and $\frac{2}{3}$ LCD = _____ |
| 4. $\frac{5}{12}$ and $\frac{1}{4}$ LCD = _____ | 10. $\frac{5}{6}$ and $\frac{3}{4}$ LCD = _____ |
| 5. $\frac{2}{9}$ and $\frac{1}{3}$ LCD = _____ | 11. $\frac{1}{2}$ and $\frac{3}{8}$ LCD = _____ |
| 6. $\frac{3}{10}$ and $\frac{2}{5}$ LCD = _____ | 12. $\frac{4}{15}$ and $\frac{1}{5}$ LCD = _____ |

✚ **Word Problems**

13. A recipe calls for $\frac{2}{3}$ cup of flour and $\frac{3}{4}$ cup of sugar. To add these, you need a common denominator. Find the LCD of 3 and 4 and rewrite both fractions. _____

14. Marco ran $\frac{5}{6}$ of a mile and Tina ran $\frac{7}{10}$ of a mile. Find the LCD so you can compare who ran farther. _____



Answer Keys

- | | |
|-------|--------------------------------------|
| 1. 12 | 8. 18 |
| 2. 15 | 9. 21 |
| 3. 24 | 10. 12 |
| 4. 12 | 11. 8 |
| 5. 9 | 12. 15 |
| 6. 10 | 13. $12; \frac{8}{12}, \frac{9}{12}$ |
| 7. 24 | 14. 30 |

Step-by-Step Explanations

- Start with the main idea. For finding common denominators, list multiples of 4 and 6; the least common multiple is 12. Fractions are easier to combine when the pieces are the same size.
- Keep the work tidy. For finding common denominators, list multiples of 3 and 5; the least common multiple is 15. Always simplify at the end so the answer is clean and useful.
- Look at what the numbers mean. For finding common denominators, list multiples of 8 and 6; the least common multiple is 24. For mixed numbers, converting to improper fractions can make the arithmetic calmer.
- Use the setup first. For finding common denominators, list multiples of 12 and 4; the least common multiple is 12. Fractions are easier to combine when the pieces are the same size.
- Check the size of the answer. For finding common denominators, list multiples of 9 and 3; the least common multiple is 9. Always simplify at the end so the answer is clean and useful.
- Match the operation to the words. For finding common denominators, list multiples of 10 and 5; the least common multiple is 10. For mixed numbers, converting to improper fractions can make the arithmetic calmer.
- Write the important values first. For finding common denominators, list multiples of 12 and 8; the least common multiple is 24. Fractions are easier to combine when the pieces are the same size.
- Follow the pattern carefully. For finding common denominators, list multiples of 6 and 9; the least common multiple is 18. Always simplify at the end so the answer is clean and useful.
- Start with the main idea. For finding common denominators, list multiples of 7 and 3; the least common multiple is 21. For mixed numbers, converting to improper fractions can make the arithmetic calmer.
- Keep the work tidy. For finding common denominators, list multiples of 6 and 4; the least common multiple is 12. Fractions are easier to combine when the pieces are the same size.
- Look at what the numbers mean. For finding common denominators, list multiples of 2 and 8; the least common multiple is 8. Always simplify at the end so the answer is clean and useful.
- Use the setup first. For finding common denominators, list multiples of 15 and 5; the least common multiple is 15. For mixed numbers, converting to improper fractions can make the arithmetic calmer.
- Check the size of the answer. For finding common denominators, the LCD of 3 and 4 is 12, so rewrite $\frac{2}{3} = \frac{8}{12}$ and $\frac{3}{4} = \frac{9}{12}$. Fractions are easier to combine when the pieces are the same size.
- Match the operation to the words. For finding common denominators, the LCD of 6 and 10 is 30; then compare $\frac{25}{30}$ and $\frac{21}{30}$. Always simplify at the end so the answer is clean and useful.



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