

All In One Worksheet: Lowest Common Multiple & Highest Common Factor

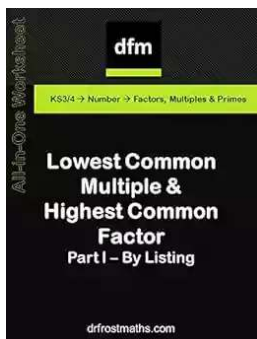
Are you struggling with understanding how to find the lowest common multiple (LCM) and highest common factor (HCF)? Look no further! In this comprehensive worksheet, we will break down these concepts to help you grasp them easily. With step-by-step explanations and interactive exercises, you will become a master of these essential mathematical operations in no time!

Understanding the Lowest Common Multiple

The lowest common multiple, also known as the least common multiple, of two or more numbers is the smallest positive integer that is divisible by all of them without leaving any remainder. It is a crucial concept in various mathematical operations, such as simplifying fractions, comparing fractions, finding equivalent fractions, and solving algebraic equations.

Steps to Find the Lowest Common Multiple

1. Start by listing the multiples of each number.
2. Identify the common multiples.
3. Choose the smallest common multiple as the LCM.



All in One Worksheet - Lowest Common Multiple & Highest Common Factor - Part I - By Listing

by Simone Malacrida (Kindle Edition)

★★★★☆ 4 out of 5

Language : English

File size : 378 KB

Print length : 882 pages

Screen Reader : Supported

X-Ray for textbooks : Enabled

Hardcover	: 474 pages
Item Weight	: 1.8 pounds
Dimensions	: 6 x 1.06 x 9 inches



Example:

Let's find the LCM of 4 and 6.

List the multiples of 4: 4, 8, 12, 16, 20, ...

List the multiples of 6: 6, 12, 18, 24, 30, ...

The common multiples are 12, 24, 36, ...

The smallest common multiple is 12, therefore, $\text{LCM}(4, 6) = 12$.

Understanding the Highest Common Factor

The highest common factor, also known as the greatest common divisor, of two or more numbers is the largest positive integer that can divide the given numbers without leaving any remainder. It is vital for simplifying fractions, reducing fractions, and solving algebraic equations.

Steps to Find the Highest Common Factor

1. Start by listing the factors of each number.
2. Identify the common factors.
3. Choose the largest common factor as the HCF.

Example:

Let's find the HCF of 12 and 30.

List the factors of 12: 1, 2, 3, 4, 6, 12.

List the factors of 30: 1, 2, 3, 5, 6, 10, 15, 30.

The common factors are 1, 2, 3, 6.

The largest common factor is 6, therefore, $HCF(12, 30) = 6$.

Practice Questions

Now that you understand how to find the LCM and HCF, it's time to put your knowledge to the test. Solve the following practice questions and check your answers at the end.

1. Find the LCM and HCF of 8 and 12.
2. Find the LCM and HCF of 15 and 25.
3. Find the LCM and HCF of 18 and 24.
4. Find the LCM and HCF of 36 and 48.

Mastering the concepts of lowest common multiple and highest common factor is crucial for various mathematical operations. By following the simple steps outlined in this all-in-one worksheet, you will be able to solve LCM and HCF problems effortlessly. Continuous practice and understanding of these concepts will greatly enhance your mathematical skills and help you tackle more complex problems in the future. Now, go ahead and excel in LCM and HCF calculations!



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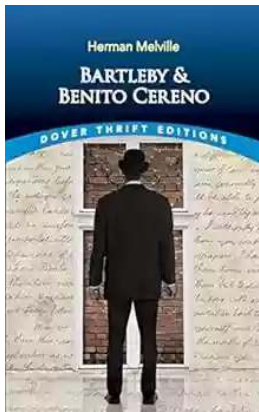
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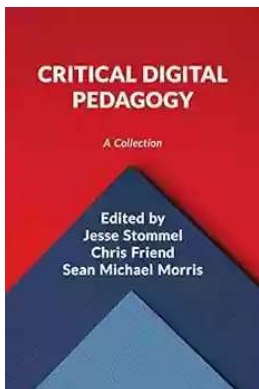


All in One' worksheets provide a standalone exercise, solutions and a worked example, all on a single printable page. It also links to specific Key Skill(s) on the DrFrostMaths for additional online practice of questions."



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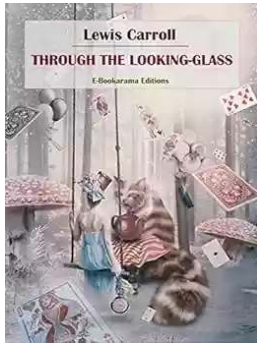
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