

Common Factors Worksheet Answer Key PDF

Common Factors Worksheet Answer Key PDF

Disclaimer: The common factors worksheet answer key pdf was generated with the help of StudyBlaze AI. Please be aware that AI can make mistakes. Please consult your teacher if you're unsure about your solution or think there might have been a mistake. Or reach out directly to the StudyBlaze team at max@studyblaze.io.

Part 1: Building a Foundation

What is a factor of a number?

undefined. A) A number that divides another number with a remainder

undefined. B) A number that divides another number without a remainder ✓

undefined. C) A number that is always greater than the original number

undefined. D) A number that can only be even

A factor is a number that divides another number without a remainder.

What is a factor of a number?

undefined. A) A number that divides another number with a remainder

undefined. B) A number that divides another number without a remainder ✓

undefined. C) A number that is always greater than the original number

undefined. D) A number that can only be even

A factor of a number is a number that divides it without leaving a remainder.

Which of the following are factors of 12?

undefined. A) 1 ✓

undefined. B) 3 ✓

undefined. C) 5

undefined. D) 6 ✓

Factors of 12 include all numbers that can divide 12 without a remainder.

Which of the following are factors of 12?

undefined. A) 1 ✓

undefined. B) 3 ✓

undefined. C) 5

undefined. D) 6 ✓

The factors of 12 are the numbers that can divide it without a remainder.

Explain in your own words what common factors are and why they are important in mathematics.

Common factors are numbers that divide two or more numbers evenly, and they are important for simplifying fractions and finding GCF.

Explain in your own words what common factors are and why they are important in mathematics.

Common factors are the factors that two or more numbers share, and they are important for simplifying fractions and finding the greatest common factor.

List all the factors of 18.

1. What are the factors of 18?

1, 2, 3, 6, 9, 18

The factors of 18 are the numbers that divide it without a remainder.

Part 2: Comprehension and Application

Which of the following statements is true about the greatest common factor (GCF)?

undefined. A) The GCF is always 1.

undefined. B) The GCF is the smallest factor common to two numbers.

undefined. C) The GCF is the largest factor common to two numbers. ✓

undefined. D) The GCF is always a prime number.

The GCF is the largest number that divides two or more numbers evenly.

Which of the following statements is true about the greatest common factor (GCF)?

undefined. A) The GCF is always 1.

undefined. B) The GCF is the smallest factor common to two numbers.

undefined. C) The GCF is the largest factor common to two numbers. ✓

undefined. D) The GCF is always a prime number.

The GCF is the largest factor that two numbers have in common.

If the factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24, which of these are also factors of 36?

undefined. A) 2 ✓

undefined. B) 4 ✓

undefined. C) 6 ✓

undefined. D) 9

Identify which factors of 24 are also factors of 36.

If the factors of 24 are 1, 2, 3, 4, 6, 8, 12, and 24, which of these are also factors of 36?

undefined. A) 2 ✓

undefined. B) 4 ✓

undefined. C) 6 ✓

undefined. D) 9

The factors of 36 that are also factors of 24 are those that divide 36 evenly.

Use prime factorization to find the GCF of 18 and 24. Show your work.

Use the prime factors of both numbers to determine the GCF.

Use prime factorization to find the GCF of 18 and 24. Show your work.

The GCF can be found by identifying the common prime factors of both numbers.

What is the greatest common factor of 16 and 24?

undefined. A) 2

undefined. B) 4 ✓

undefined. C) 8

undefined. D) 12

The GCF of 16 and 24 is the largest number that divides both evenly.

Part 3: Analysis, Evaluation, and Creation

If the GCF of two numbers is 1, what can you conclude about these numbers?

undefined. A) They are both even numbers.

undefined. B) They are both prime numbers.

undefined. C) They are coprime (relatively prime). ✓

undefined. D) They are multiples of each other.

If the GCF is 1, the numbers are coprime, meaning they have no common factors other than 1.

If the GCF of two numbers is 1, what can you conclude about these numbers?

undefined. A) They are both even numbers.

undefined. B) They are both prime numbers.

undefined. C) They are coprime (relatively prime). ✓

undefined. D) They are multiples of each other.

If the GCF is 1, the numbers are coprime (relatively prime).

Analyze the following pairs of numbers and select those that are coprime.

undefined. A) 8 and 15 ✓

undefined. B) 9 and 28 ✓

undefined. C) 14 and 21

undefined. D) 25 and 30

Coprime pairs are those that have no common factors other than 1.

Analyze the following pairs of numbers and select those that are coprime.

undefined. A) 8 and 15 ✓

undefined. B) 9 and 28 ✓

undefined. C) 14 and 21

undefined. D) 25 and 30

Coprime numbers have a GCF of 1.

Which method is more efficient for finding the GCF of large numbers, listing all factors or using prime factorization? Why?

Using prime factorization is generally more efficient for large numbers as it reduces the number of calculations needed.

Which method is more efficient for finding the GCF of large numbers, listing all factors or using prime factorization? Why?

Using prime factorization is generally more efficient for large numbers.

Create a real-world problem that involves finding the greatest common factor, and explain how solving it can be useful in everyday life.

Real-world problems involving GCF can help in situations like sharing resources or organizing events.

Create a real-world problem that involves finding the greatest common factor, and explain how solving it can be useful in everyday life.

Real-world problems involving GCF can help in resource allocation and planning.