

Common Factors Worksheet Questions and Answers PDF

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Part 1: Building a Foundation

What is a factor of a number?

Hint: Think about how numbers relate to each other.

- A) A number that divides another number with a remainder
- B) A number that divides another number without a remainder ✓
- C) A number that is always greater than the original number
- 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?

Hint: Think about how numbers relate to each other in division.

- A) A number that divides another number with a remainder
- B) A number that divides another number without a remainder ✓
- C) A number that is always greater than the original number
- 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?

Hint: Consider the numbers that divide 12 evenly.

- A) 1 ✓
- B) 3 ✓
- C) 5
- D) 6 ✓

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

Which of the following are factors of 12?

Hint: Consider the numbers that can divide 12 evenly.

A) 1 ✓

B) 3 ✓

C) 5

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.

Hint: Think about how common factors relate to multiple numbers.

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.

Hint: Think about how common factors relate to multiple numbers.

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.

Hint: Consider all the numbers that can divide 18 evenly.

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)?

Hint: Think about the definition of GCF.

- A) The GCF is always 1.
- B) The GCF is the smallest factor common to two numbers.
- C) The GCF is the largest factor common to two numbers. ✓
- 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)?

Hint: Think about the definition of GCF.

- A) The GCF is always 1.
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- C) The GCF is the largest factor common to two numbers. ✓
- 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?

Hint: Consider the factors of 36.

- A) 2 ✓
- B) 4 ✓
- C) 6 ✓
- 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?

Hint: Consider the factors of 36 and see which match.

- A) 2 ✓
- B) 4 ✓
- C) 6 ✓
- 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.

Hint: Break down both numbers into their prime factors.

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.

Hint: Break down each number into its prime factors.

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

What is the greatest common factor of 16 and 24?

Hint: Consider the factors of both numbers.

- A) 2
- B) 4 ✓
- C) 8
- 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?

Hint: Think about the relationship between the numbers.

- A) They are both even numbers.
- B) They are both prime numbers.
- C) They are coprime (relatively prime). ✓
- 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.

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- 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.

Hint: Look for pairs that share no common factors.

- A) 8 and 15 ✓
- B) 9 and 28 ✓
- C) 14 and 21
- 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.

Hint: Consider the GCF of each pair.

- A) 8 and 15 ✓
- B) 9 and 28 ✓
- C) 14 and 21
- 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?

Hint: Consider the time and effort involved in each method.

■ **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?

Hint: Consider the pros and cons of each method.

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.

Hint: Think about situations where you might need to share or divide things evenly.

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.

Hint: Think about situations where you need to share or divide things evenly.

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