Divisibility Worksheet Questions and Answers PDF

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Part 1: Building a Foundation

What is the rule for determining if a number is divisible by 5?

Hint: Think about the last digit of the number.

- ◯ **The number ends in 0 or 5. ✓**
- ◯ The number is even.
- ◯ The sum of the digits is divisible by 5.
- ◯ The last two digits form a number divisible by 5.

> A number is divisible by 5 if it ends in 0 or 5.

What is the rule for determining if a number is divisible by 5?

Hint: Consider the last digit of the number.

- ◯ **A) The number ends in 0 or 5. ✓**
- ◯ B) The number is even.
- ◯ C) The sum of the digits is divisible by 5.
- ◯ D) The last two digits form a number divisible by 5.

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- ◯ **A) The number ends in 0 or 5. ✓**
- ◯ B) The number is even.
- ◯ C) The sum of the digits is divisible by 5.
- ◯ D) The last two digits form a number divisible by 5.

> A number is divisible by 5 if it ends in 0 or 5.

Which of the following numbers is divisible by 3?

Hint: Use the rule that the sum of the digits must be divisible by 3.

- [ ] **123 ✓**
- [ ] **456 ✓**
- [ ] **789 ✓**
- [ ] 101

> The numbers 123, 456, and 789 are divisible by 3.

Which of the following numbers is divisible by 3?

Hint: Check the sum of the digits for divisibility by 3.

- [ ] **A) 123 ✓**
- [ ] **B) 456 ✓**
- [ ] **C) 789 ✓**
- [ ] D) 101

> The numbers 123, 456, and 789 are divisible by 3.

Which of the following numbers is divisible by 3?

Hint: Check the sum of the digits for divisibility by 3.

- [ ] **A) 123 ✓**
- [ ] **B) 456 ✓**
- [ ] **C) 789 ✓**
- [ ] D) 101

> The numbers 123, 456, and 789 are divisible by 3.

Explain why the number 246 is divisible by 2.

Hint: Consider the last digit of the number.

246 is divisible by 2 because it ends in an even number.

Explain why the number 246 is divisible by 2.

Hint: Consider the last digit of the number.

246 is divisible by 2 because it ends in an even number.

Explain why the number 246 is divisible by 2.

Hint: Consider the last digit of the number.

246 is divisible by 2 because it ends in an even number.

Part 2: Understanding and Interpretation

Why is the number 120 divisible by both 3 and 4?

Hint: Consider the rules for both numbers.

120 is divisible by 3 because the sum of its digits is 3, and it is divisible by 4 because the last two digits (20) form a number that is divisible by 4.

Why is the number 120 divisible by both 3 and 4?

Hint: Consider the sum of the digits and the last two digits.

120 is divisible by 3 because the sum of its digits is 3, and it is divisible by 4 because the last two digits form 20, which is divisible by 4.

Why is the number 120 divisible by both 3 and 4?

Hint: Consider the sum of the digits and the last two digits.

120 is divisible by 3 because the sum of its digits is 3, and it is divisible by 4 because the last two digits form 20, which is divisible by 4.

If a number is divisible by 9, what can you infer about its divisibility by 3?

Hint: Think about the relationship between the two numbers.

- ◯ **It is also divisible by 3. ✓**
- ◯ It is not divisible by 3.
- ◯ It may or may not be divisible by 3.
- ◯ Divisibility by 9 has no relation to divisibility by 3.

If a number is divisible by 9, it is also divisible by 3.

If a number is divisible by 9, what can you infer about its divisibility by 3?

Hint: Think about the relationship between 9 and 3.

- ◯ **A) It is also divisible by 3. ✓**
- ◯ B) It is not divisible by 3.
- ◯ C) It may or may not be divisible by 3.
- ◯ D) Divisibility by 9 has no relation to divisibility by 3.

If a number is divisible by 9, it is also divisible by 3.

If a number is divisible by 9, what can you infer about its divisibility by 3?

Hint: Think about the relationship between 9 and 3.

- ◯ **A) It is also divisible by 3. ✓**
- ◯ B) It is not divisible by 3.
- ◯ C) It may or may not be divisible by 3.
- ◯ D) Divisibility by 9 has no relation to divisibility by 3.

If a number is divisible by 9, it is also divisible by 3.

Which of the following numbers is divisible by both 2 and 5?

Hint: Consider the last digit of each number.

- ☐ **40 ✓**
- ☐ 45
- ☐ **50 ✓**

- [ ] 55

> The numbers 40 and 50 are divisible by both 2 and 5.

Which of the following numbers is divisible by both 2 and 5?

Hint: Consider the last digit of each number.

- [ ] **A) 40 ✓**
- [ ] B) 45
- [ ] **C) 50 ✓**
- [ ] D) 55

> The numbers 40 and 50 are divisible by both 2 and 5.

Which of the following numbers is divisible by both 2 and 5?

Hint: Consider the last digit of each number.

- [ ] **A) 40 ✓**
- [ ] B) 45
- [ ] **C) 50 ✓**
- [ ] D) 55

> The numbers 40 and 50 are divisible by both 2 and 5.

Part 3: Application and Analysis

Apply the divisibility rules to determine if 1,234 is divisible by 4.

Hint: Look at the last two digits of the number.

1,234 is divisible by 4 because the last two digits (34) are not divisible by 4.

Apply the divisibility rules to determine if 1,234 is divisible by 4.

Hint: Check the last two digits of the number.

1,234 is divisible by 4 because the last two digits, 34, are not divisible by 4.

Apply the divisibility rules to determine if 1,234 is divisible by 4.

Hint: Check the last two digits of the number.

1,234 is divisible by 4 because the last two digits, 34, are not divisible by 4.

A number ends in 0. What can you conclude about its divisibility by 2, 5, and 10?

Hint: Consider the last digit and the rules for each number.

- [ ] Divisible by 2 and 5 only.
- [ ] Divisible by 5 and 10 only.
- [ ] **Divisible by 2, 5, and 10. ✓**
- [ ] Divisible by 2 and 10 only.

A number that ends in 0 is divisible by 2, 5, and 10.

A number ends in 0. What can you conclude about its divisibility by 2, 5, and 10?

Hint: Consider the last digit and the rules for each number.

- [ ] A) Divisible by 2 and 5 only.
- [ ] B) Divisible by 5 and 10 only.
- [ ] **C) Divisible by 2, 5, and 10. ✓**
- [ ] D) Divisible by 2 and 10 only.

> A number ending in 0 is divisible by 2, 5, and 10.

A number ends in 0. What can you conclude about its divisibility by 2, 5, and 10?

Hint: Consider the last digit of the number.

- [ ] A) Divisible by 2 and 5 only.
- [ ] B) Divisible by 5 and 10 only.
- [ ] **C) Divisible by 2, 5, and 10. ✓**
- [ ] D) Divisible by 2 and 10 only.

> A number that ends in 0 is divisible by 2, 5, and 10.

Calculate whether 987 is divisible by 9 using the appropriate rule.

Hint: Use the sum of the digits to check divisibility.

> **987 is divisible by 9 because the sum of its digits (9 + 8 + 7 = 24) is divisible by 9.**

Calculate whether 987 is divisible by 9 using the appropriate rule.

Hint: Consider the sum of the digits.

987 is divisible by 9 because the sum of its digits (9 + 8 + 7 = 24) is divisible by 9.

Calculate whether 987 is divisible by 9 using the appropriate rule.

Hint: Consider the sum of the digits.

987 is divisible by 9 because the sum of its digits (9 + 8 + 7 = 24) is divisible by 9.

Break down the number 1,056 to check its divisibility by 7 using the subtraction method.

Hint: Use the subtraction method to simplify the number.

To check 1,056 for divisibility by 7, you can subtract multiples of 7 from it until you reach a manageable number.

Part 4: Evaluation and Creation

Break down the number 1,056 to check its divisibility by 7 using the subtraction method.

Hint: Use the subtraction method to check divisibility.

To check if 1,056 is divisible by 7, you can use the subtraction method and find that it is not divisible.

Break down the number 1,056 to check its divisibility by 7 using the subtraction method.

Hint: Consider the subtraction method for checking divisibility.

To check if 1,056 is divisible by 7, you can use the subtraction method and find that it is not divisible.

Evaluate the number 2,016 for divisibility by 2, 3, 4, 6, 8, and 9. Provide a detailed explanation for each rule applied.

Hint: Check each rule step by step.

2,016 is divisible by 2, 3, 4, 6, 8, and 9, and each rule can be explained based on the last digits and the sum of the digits.

Evaluate the number 2,016 for divisibility by 2, 3, 4, 6, 8, and 9. Provide a detailed explanation for each rule applied.

Hint: Check the last digits and the sum of the digits for each rule.

2,016 is divisible by 2, 3, 4, 6, 8, and 9 based on the respective rules.

Evaluate the number 2,016 for divisibility by 2, 3, 4, 6, 8, and 9. Provide a detailed explanation for each rule applied.

Hint: Consider the last digits and the sum of the digits.

2,016 is divisible by 2, 3, 4, 6, 8, and 9 based on the respective rules.

Create a number that is divisible by 3, 5, and 10, and explain your process.

Hint: Consider the last digits and the sum of the digits.

A number like 150 is divisible by 3, 5, and 10 because it meets the criteria for each.

Create a number that is divisible by 3, 5, and 10, and explain your process.

Hint: Consider the rules for each number.

A number like 150 is divisible by 3, 5, and 10 because it meets the criteria for each rule.

Create a number that is divisible by 3, 5, and 10, and explain your process.

Hint: Consider the rules for each number.

A number like 150 is divisible by 3, 5, and 10 because it meets the criteria for each.

Propose a real-world scenario where understanding divisibility rules could be beneficial, and explain how you would apply these rules.

Hint: Think about practical applications of divisibility.

Understanding divisibility rules can help in budgeting, sharing items evenly, or organizing groups.

Propose a real-world scenario where understanding divisibility rules could be beneficial, and explain how you would apply these rules.

Hint: Think about situations involving grouping or sharing.

Understanding divisibility rules can help in scenarios like dividing items evenly among groups.

Propose a real-world scenario where understanding divisibility rules could be beneficial, and explain how you would apply these rules.

Hint: Think about practical applications of divisibility.

Understanding divisibility rules can help in budgeting, sharing items evenly, or organizing groups.