# Divisibility Worksheet

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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.

**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.

**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.

**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

**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

**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

**Explain why the number 246 is divisible by 2.**

*Hint: Consider the last digit of the number.*

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*Hint: Consider the last digit of the number.*

## Part 2: Understanding and Interpretation

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

*Hint: Consider the rules for both numbers.*

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

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

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

**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, 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, 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.

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

*Hint: Consider the last digit of each number.*

☐ 40
☐ 45
☐ 50
☐ 55

**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

**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

## 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.*

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

*Hint: Check the last two digits of the number.*

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

*Hint: Check the last two digits of the number.*

**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 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 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.

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

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

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

*Hint: Consider the sum of the digits.*

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

*Hint: Consider the sum of the digits.*

**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.*

## 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.*

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

*Hint: Consider the subtraction method for checking divisibility.*

**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.*

**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.*

**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.*

**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.*

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

*Hint: Consider the rules for each number.*

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

*Hint: Consider the rules for each number.*

**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.*

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*Hint: Think about situations involving grouping or sharing.*

**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.*