



# **Divisibility Rules**

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Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Divisibility Rules!

Review the rules:

A number is divisible by:

- 2 if the number ends in an even digit (0, 2, 4, 6, 8).
- 3 if the sum of the digits is divisible by 3.
- 4 if the last two digits are divisible by 4.
- 5 if the number ends in a 0 or 5.
- 6 if the number is divisible by both 2 and 3
- 9 if the sum of the digits is divisible by 9.
- 10 if the number ends with a 0.

Example:

- 352 (last digit is even)
- 312 ( $3+1+2=6$ )
- 512 (divisible by 4)
- 345 (last digit is 5)
- 822 (even and  $8+2+2=12$ )
- 702 ( $7+0+2=9$ )
- 1,230 (last digit is 0)

Directions: Place a check in each column the number is divisible by. For example: The number 90 is divisible by 2, 3, 5, 6, 9, and 10.

Number	2	3	4	5	6	9	10
90	✓	✓		✓	✓	✓	✓
1,023							
124							
1,620							
21							
127							
612							
718							
204							

Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Divisibility Rules!

**Directions:** Use the rules of divisibility to answer the following word problems. Use the work space provided below.

John and Susan are getting married! They have 342 guests that plan to attend. They are planning their table set up and want the same number of guests at each table. Using the rules of divisibility, how many guests could John and Susan put at each table?

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Ted has 140 books in his library at home. He wants to place an equal number of books on each shelf. Using the rules of divisibility, what are some possible number of shelves Ted could use?

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Work Space

Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Divisibility Rules!

Directions: Use the rules of divisibility to create a number that is divisible by:

2: \_\_\_\_\_

3: \_\_\_\_\_

4: \_\_\_\_\_

5: \_\_\_\_\_

6: \_\_\_\_\_

9: \_\_\_\_\_

10: \_\_\_\_\_

Work Space

Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Divisibility Rules!

**Directions:** Using the rules of divisibility, choose one digit a number is divisible by and explain why.

**Example:**

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

**900 is divisible by \_\_\_\_\_ because \_\_\_\_\_**

**81 is divisible by \_\_\_\_\_ because \_\_\_\_\_**

**102 is divisible by \_\_\_\_\_ because \_\_\_\_\_**

**65 is divisible by \_\_\_\_\_ because \_\_\_\_\_**

**810 is divisible by \_\_\_\_\_ because \_\_\_\_\_**

**312 is divisible by \_\_\_\_\_ because \_\_\_\_\_**

**918 is divisible by \_\_\_\_\_ because \_\_\_\_\_**

**1,021 is divisible by \_\_\_\_\_ because \_\_\_\_\_**

Name: **Answer Key** Date: \_\_\_\_\_

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- 10 if the number ends with a 0.

Example:

- 352 (last digit is even)
- 312 ( $3+1+2=6$ )
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- 345 (last digit is 5)
- 822 (even and  $8+2+2=12$ )
- 702 ( $7+0+2=9$ )
- 1,230 (last digit is 0)

Directions: Place a check in each column the number is divisible by. For example: The number 90 is divisible by 2, 3, 5, 6, 9, and 10.

Number	2	3	4	5	6	9	10
90	✓	✓		✓	✓	✓	✓
1,023		✓					
124	✓		✓				
1,620	✓	✓	✓	✓	✓	✓	✓
21		✓					
127							
612	✓	✓	✓		✓	✓	
718	✓						
204	✓	✓	✓		✓		

Name: **Answer Key** Date: \_\_\_\_\_

# Divisibility Rules!

**Directions:** Use the rules of divisibility to answer the following word problems. Use the work space provided below.

John and Susan are getting married! They have 342 guests that plan to attend. They are planning their table set up and want the same number of guests at each table. Using the rules of divisibility, how many guests could John and Susan put at each table?

2	3	6	9
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Ted has 140 books in his library at home. He wants to place an equal number of books on each shelf. Using the rules of divisibility, what are some possible number of shelves Ted could use?

2	4	5	10
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Work Space

Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Answer Key

## Divisibility Rules!

Directions: Use the rules of divisibility to create a number that is divisible by:

- 2: Many possible answers. Number must end in even digit.
- 3: Many possible answers. Sum of digits must be divisible by 3.
- 4: Many possible answers. Last two digits must be divisible by 4.
- 5: Many possible answers. Last digit must be 0 or 5.
- 6: Many possible answers. Number must be divisible by 2 and 3.
- 9: Many possible answers. Sum of digits must be divisible by 9.
- 10: Many possible answers. Number must end in 0.

Work Space



Name: \_\_\_\_\_ Date: \_\_\_\_\_

# Divisibility Rules!

**Directions:** Using the rules of divisibility, choose one digit a number is divisible by and explain why.

**Example:**

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

900 is divisible by 2,3,4,5,6,9,10 because (many possible answers, should refer to divisibility rules)

81 is divisible by 3,9 because (many possible answers, should refer to divisibility rules)

102 is divisible by 2,3,6 because (many possible answers, should refer to divisibility rules)

65 is divisible by 5 because (many possible answers, should refer to divisibility rules)

810 is divisible by 2,3,5,6,9,10 because (many possible answers, should refer to divisibility rules)

312 is divisible by 2,3,4,6 because (many possible answers, should refer to divisibility rules)

918 is divisible by 2,3,6,9 because (many possible answers, should refer to divisibility rules)

1,021 is divisible by 3 because (many possible answers, should refer to divisibility rules)

**I'd love to hear your feedback about my TPT products!**

**Resources:**

**Background and frames from [www.MyCuteGraphics.com](http://www.MyCuteGraphics.com)**

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**Happy Teaching!**