



Divisibility Rules

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:

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

900 is divisible by _____ because _____

91 is divisible by _____ because _____

102 is divisible by _____ because _____

65 is divisible by _____ because _____

910 is divisible by _____ because _____

312 is divisible by _____ because _____

918 is divisible by _____ because _____

1,021 is divisible by _____ because _____

Name: ANSWER KEY

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- 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: ANSWER KEY

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: 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: ANSWER KEY

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

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