

Divisibility Math Tricks to Learn the Facts (*Divisibility*)

More and more in my teaching career, I see that we often are able to enhance student learning in mathematics with tricks. There are many tricks to teach children divisibility in mathematics. Some tricks that I used to use in my classroom are listed here. If you know of some that I may have missed, drop into the forum and let everyone know. I'll add them to this list as I see them.

Dividing by 2

1. All even numbers are divisible by 2. E.g., all numbers ending in 0,2,4,6 or 8.

Dividing by 3

1. Add up all the digits in the number.
2. Find out what the sum is. If the sum is divisible by 3, so is the number
3. For example: 12123 ($1+2+1+2+3=9$) 9 is divisible by 3, therefore 12123 is too!

Dividing by 4

1. Are the last two digits in your number divisible by 4?
2. If so, the number is too!
3. For example: 358912 ends in 12 which is divisible by 4, thus so is 358912.

Dividing by 5

1. Numbers ending in a 5 or a 0 are always divisible by 5.

Dividing by 6

1. If the Number is divisible by 2 and 3 it is divisible by 6 also.

Dividing by 7 (2 Tests)

- Take the last digit in a number.
- Double and subtract the last digit in your number from the rest of the digits.
- Repeat the process for larger numbers.
- Example: 357 (Double the 7 to get 14. Subtract 14 from 35 to get 21 which is divisible by 7 and we can now say that 357 is divisible by 7.

NEXT TEST

- Take the number and multiply each digit beginning on the right hand side (ones) by 1, 3, 2, 6, 4, 5. Repeat this sequence as necessary
- Add the products.
- If the sum is divisible by 7 - so is your number.
- Example: Is 2016 divisible by 7?
- $6(1) + 1(3) + 0(2) + 2(6) = 21$
- 21 is divisible by 7 and we can now say that 2016 is also divisible by 7.

Dividing by 8

1. This one's not as easy, if the last 3 digits are divisible by 8, so is the entire number.
2. Example: 6008 - The last 3 digits are divisible by one, therefore, so is 6008.

Dividing by 9

1. Almost the same rule and dividing by 3. Add up all the digits in the number.
2. Find out what the sum is. If the sum is divisible by 9, so is the number.
3. For example: 43785 ($4+3+7+8+5=27$) 27 is divisible by 9, therefore 43785 is too!

Dividing by 10

1. If the number ends in a 0, it is divisible by 10.

Taken from: <http://math.about.com/library/bldivide.htm>