



DIVISIBILITY RULES

Name _____

Date _____

DR:01

A number is divisible by

2

If the last digit is an even number or zero.

Example: 562, 36, 6708, 94, 100

3

If the sum of its digits is divisible by 3.

Example: 2406

$$2+4+0+6=12$$

$$12 \div 3 = 4$$

4

If the last two digits are divisible by 4.

Example: 3528

$$28 \div 4 = 7$$

5

If the last digit is either 0 or 5.

Example: 260, 55

6

If the number is divisible by both 2 and 3.

Example: 330

$$3+3+0=6$$

$$6 \div 2 = 3$$



DIVISIBILITY RULES

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DR:01a

A number is divisible by

7

If the difference between twice the last number and the other digits of the number is divisible by 7.

Example: 385

$$38 - (2 \times 5) = 28$$

$$28 \div 7 = 4$$

8

If the last three digits are divisible by 8.

Example: 3816

$$816 \div 8 = 102$$

9

If the sum of the digits are divisible by 9.

Example: 4599

$$4 + 5 + 9 + 9 = 27$$

$$27 \div 9 = 3$$

10

If the number ends with zero.

Example: 170

11

Refer next page.

12

If the number is divisible by both 3 and 4.

Example: 60

$$6 + 0 = 6$$

$$6 \div 3 = 2$$

$$60 \div 4 = 15$$



DIVISIBILITY RULES

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A number is divisible by 11

DR:01b

Take the alternate digits. Separate the digits in odd places and even places. Sum up the numbers in these two groups and find their difference. If the difference is 0 or divisible by 11, then the given number is divisible by 11.

Example: 31482

$$\text{Odd place} = 3+4+2 = 9$$

$$\text{Even place} = 1+8 = 9$$

$$\text{Difference} = 9-9 = 0$$

Other conditions:

Number of digits even:

If the number of digits are even in a number, add the first digit and subtract the last digit from the remaining number.

Example: 2662

$$\text{First digit} = 2$$

$$\text{Last digit} = 2$$

$$66+2-2 = 66$$

$$66 \text{ is divisible by } 11$$

2662 is divisible by 11

Number of digits odd:

If the number of digits are odd, subtract the first and the last number from the remaining digits.

Example: 26510

$$\text{First digit} = 2$$

$$\text{Last digit} = 1$$

$$651-2-0 = 649$$

$$649 \text{ is divisible by } 11$$

26510 is divisible by 11