

To find if some number X is divisible by a certain number.

Use one of the following tests

Number	Test to perform
By-2	<p>If the last digit of the number is divisible by two, then X is too.</p> <p>Eg: 105<u>8</u> is divisible by 2</p>
By-3	<p>If the sum of the digits of the number X is divisible by three, then X is too</p> <p>Eg: 8721, since $8+7+2+1=18$ and $1+8=9$ which is divisible by 3 so true.</p>
By-4	<p>If the last two digits are divisible by four, then X is too</p>
By-5	<p>If the last digit is 5 or 0, then X is divisible by 5</p> <p>Eg: Is 21978035 divisible by 5? Check the last digit which is 5 Thus, given number is divisible by 5</p>
By-6	<p>If X is divisible by 2 and by 3, then X is divisible by 6</p>
By-7	<p>↪ First you double the last digit of the number X.</p> <p>↪ Second subtract it from X without its last digit.</p> <p>Eg: Is 2456 divisible by 7?</p> <ol style="list-style-type: none"> 1) Take last digit "6" and double it to get: $2 \times 6 = 12$ 2) Now find: $245\cancel{6} - 12 = 233$ 3) Again take last digit "3" and double it to get: $2 \times 3 = 6$ 4) Now find: $23\cancel{3} - 6 = 17$ (which is not divisible by 7) 5) Repeat this procedure until you get a number that you know for sure is or is not divisible by seven.

By-8	If the last three digits are divisible by 8, then X is too
By-9	If the sum of the digits of the number X is divisible by nine, then X is too
By-10	If the last digit of X is 0, then X is divisible by 10
By-11	<p>↪ First add the odd digits of the given number, first, third, fifth, seventh, etc.</p> <p>↪ Second add the even digits the given number, second, fourth, sixth, eighth, etc.</p> <p>↪ Third subtract the sums from each other, if the difference is divisible by 11, then the number X is too</p> <hr/> <p>Eg: Is the number 3927 divisible by 11?</p> <ol style="list-style-type: none"> 1) Pick up the odd digits (1st & 3rd): 5 and 2 2) Add them: $3+2=5$ 3) Pick up the even digits (2nd & 4th): 3 and 7 4) Add them: $9+7=16$ 5) Subtract the two sums: $16-5=11$. <p>Thus, 3927 is divisible by 11.</p>