

## Easy Tests For Divisibility

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1 - Every number is divisible by 1, and that number divisible by 1 is equal to that number.

2 - Every even number is divisible by 2. This is the definition of even.

3 - If the digits add up to a number that is divisible by 3, then the number is divisible by 3. This is because  $\frac{1}{3} = 0.33333333$  recurring, so there is only 1 recurring string of length 1. e.g. 27 is divisible by 3 because  $2+7=9$  is, but 28 is not divisible by 3 because  $2+8=10$  is not.

4 - A number is divisible by 4 if the last two digits are divisible by 4. 324 is divisible 4 because 24 is, but 374 is not divisible by 4 because 74 is not.

5 - A number is divisible by 5 if the last digit is 0 or 5.

6 - A number is divisible by 6 if it is even and the digits add up to a number that is divisible by 3.

7 - There is no simple test for divisibility by 7.

8 - A number is divisible by 8 if the last three digits are. e.g. 789736 is divisible by 8 because 736 is but -0690652 is not divisible by 8 because 652 is not.

9 - If the digits add up to a number that is divisible by 9, then the number is divisible by 9. This is because  $\frac{1}{9} = 0.9999999999$  recurring, so there is only 1 recurring string of length 1. e.g. 27 is divisible by 9 because  $2+7=9$  is, but 28 is not divisible by 9 because  $2+8=10$  is not.

10 - A number is divisible by 10 if the last digit is 0.

11 - A number is divisible by 11 if you add and take away consecutive digits in turn to get a number that is divisible by 11. e.g. 209 is divisible by 11 because  $2-0+9=11$  which is divisible by 11.