

## Divisibility Tests for 2 to 10

Australian Curriculum: national and State References

Identify and describe factors and multiples of whole numbers and use them to solve problems	<b>National</b>	<b>Victoria</b>	<b>New South Wales</b>
	ACMNA098	VCMNA181	Stage 3 Whole Numbers 1
Elaborations	exploring factors and multiples using number sequences using simple divisibility tests		

Divisibility tests are referred to in the elaborations for ACMNA098 which is about exploring the factors and multiples of whole numbers. These tests are patterns embedded within the digits of numbers and can aid in improving fluency of division calculations.

The tests for divisibility of a number by the numbers 2 to 10 are:

- A number is divisible by 2 if it is even.
- A number is divisible by 3 if the sum of its digits is divisible by three. If the result has too many digits to be sure then keep adding until you have just a single digit.
- A number is divisible by 4 if its last two digits are divisible by 4.
- A number is divisible by 5 if it ends in 0 or 5.
- A number is divisible by 6 if it is even and divisible by 3. A number is divisible by 8 if the last three digits are divisible by 4.
- A number is divisible by 9 if the sum of its digits is divisible by 9. . If the result has too many digits to be sure then keep adding until you have just a single digit.
- A number is divisible by 10 if it ends in zero.
  
- Divisibility by 7: Not as easy as the others
  - 1) take the last digit of the number
  - 2) Double it
  - 3) Subtract the result from the remaining digits. 4) Repeat until you can see a number that is a multiple of 7 or you get to 0.

Example : 805

$$80 - 2 \times 5 = 70$$

70 is divisible by 7. So then is 805