DIVISIBILITY CRITERIA

A number is divisible by:

2 if the number is even or ends in zero

3 if the sum of the digits is divisible by 3

4 if the last two digits are divisible by 4

Ex: 2316 is divisible by 4 because 16 is divisible by 4

5 if the last digit is 5 or zero

6 if the last digit is even and the sum of the digits is divisible by 3

7 if you delete the units digit, subtract twice the units digit from the remaining number, and the answer is divisible by 7

Ex: 161 (1 ✓)
-2
14 is divisible by 7

8 if the last three digits are divisible by 8

Ex: 1168 is divisible by 8 because 168 is divisible by 8

9 if the sum of digits is divisible by 9

11 if the difference between the sum of the digits in even places and the sum of the digits in odd places is equal to zero or 11

Ex: for 649, $(6 + 9) – 4 = 11$, so 649 is divisible by 11

or: if you delete the units digit, subtract the units digit from the remaining number, and the answer is divisible by 11

Ex: 649 (9 ✓)
-9
55 is divisible by 11

13 if you delete the units digit, add 4 times the units digit to the remaining number, and the answer is divisible by 13

Ex: 195
$+20$
39 is divisible by 13

17 if you delete the units digit, subtract 5 times the units digit from the remaining number, and the answer is divisible by 17

Ex: 391
-5
34 is divisible by 17

19 if you delete the units digit, add twice the units digit to the remaining number, and the answer is divisible by 19

Ex: 437
$+14$
57 is divisible by 19

Note: the tests can be performed multiple times in succession.

In the last example: $437 \rightarrow 57$
$+14 \quad +14$
$57 \quad 19$ is divisible by 19