Summary of Divisibility Tests

Number **Divisibility Test**

The tests for 2, 5, and 10 depend on the last digit, while 4 and 8 are extensions of this.

2 One's digit is 0,2,4,6 or 8 (even number)

5 One's digit is 0 or 5

10 One's digit is 0

4 Number formed by last 2 digits is divisible by 4

8 The number formed by last 3 digits can be divided by 8

- Example: 8659 => last 3 digits are 659
  659/8=82.375 it does not divide evenly so therefore 8659 is not divisible by 8.

The tests for 3, 9 and 6 depend on the sum of the digits.

3 Sum of digits is divisible by 3

9 Sum of digits is divisible by 9

- Example: 8659 => 8 + 6 + 5 + 9 = 28; 9 is not a factor of 28 so
  28 is not divisible by 9, therefore 8659 is not divisible by 9.

6 Number is divisible by 2 **and** 3. Thus apply the tests for 2 and 3.

Other tests:

7 Double the one's digit and subtract that # from the rest of the digits.
Repeat this process until the result is obviously divisible by 7, or not.

- Example: 8659 => double the 9 and subtract from 865
  -18 you get
  847 => double the 7 and subtract from 84
  14
  you get 70; if this number is divisible by 7 then the
  original number is divisible by 7.

11 The difference of the sums from alternate digits is divisible by 11.

Example 1: **8**6**5**9 => **8 + 5**=**13** and 6 + 9=15; (13 – 15) = -2 =>
8659 is not divisible by 11.
Example 2: **7**1**9**,0**8**1 => 7 + 9 + 8 = 24 and 1 + 0 + 1 = 2;
(24 - 2) = 22 => 719,081 is divisible by 11.

12 If the number is divisible by 3 and 4.
18 If the number is divisible by 2 and 9.