# The property of a type of numbers to be often m-primes and m-composites

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**Abstract.** In previous papers I presented already few types of numbers which conduct through concatenation often to cm-integers. In this paper I present a type of numbers which seem to be often m-primes or m-composites. These are the numbers of the form 1nn...nn1 (in all of my papers I understand through a number abc the number where a, b, c are digits and through the number a*b*c the product of a, b, c), where n is a digit or a group of digits, repetead by an odd number of times.

**Observation:**

The numbers of the form 1nn...nn1, where n is a digit or a group of digits, repetead by an odd number of times, seem to be often m-primes or m-composites.

**Examples:**

:    N = 131 is prime, so m-prime by definition;
:    N = 13331 is prime, so m-prime by definition;
:    N = 1333331 is prime, so m-prime by definition;
:    N = 133333331 = 11287*11813 and 11287 + 11813 − 1 = 23099 which is prime so N is m-prime;
:    N = 13333333331 = 53*109*2308003 and 109*2308003 + 53 − 1 = 251572379 which is prime so N is m-composite;

:    N = 141 = 3*47 and 47 + 3 − 1 = 49 = 7*7 and 7 + 7 − 1 = 13 which is prime so N is m-prime;
:    N = 14441 = 7*2063 and 7 + 2063 − 1 = 2069 which is prime so N is m-prime;
:    N = 1444441 is prime, so m-prime by definition;
:    N = 14444444441 = 7*67*127*197*1231 and 67*127*197*1231 + 7 − 1 = 2063492069 which is prime so N is m-composite;

:    N = 151 is prime, so m-prime by definition;
:    N = 15551 is prime, so m-prime by definition;
:    N = 155555551 = 31*61*82261 and 61*82261 + 31 − 1 = 5017951 which is prime so N is m-composite;
:    N = 15555555551 = 1709*9102139 and 9102139 + 1709 − 1 = 9103847 which is prime so N is m-prime;
:    N = 1555555555551 = 3*19*733*2081*17891 and 3*19*733*17891 + 2081 − 1 = 747505951 which is prime so N is m-composite;

: N = 101 is prime, so m-prime by definition;
: N = 1000001 = 101*9901 and 101 + 9901 - 1 = 10001 = 73*137 and 73 + 137 - 1 = 209 = 11*19 and 11 + 19 - 1 = 29 which is prime so N is m-prime;
: N = 100000001 = 17*5882353 and 17 + 5882353 - 1 = 5882369 = 137*42937 and 137 + 42937 - 1 = 43073 = 19*2267 and 19 + 2267 - 1 = 2285 = 5*457 and 5 + 457 - 1 = 461 which is prime so N is m-prime;


: N = 12323231 = 29*424939 and 424939 + 29 - 1 = 424967 which is prime so N is m-prime;
: N = 13232321 = 3539*3739 and 3539 + 3739 - 1 = 7277 = 19*383 and 19 + 383 - 1 = 401 which is prime so N is m-prime;
: N = 13434341 = 373*36017 and 373 + 36017 - 1 = 36389 which is prime so N is m-prime;
: N = 14343431 = 59*243109 and 59 + 243109 - 1 = 243167 which is prime so N is m-prime;
: N = 12424241 is prime, so m-prime by definition;
: N = 14242421 is prime, so m-prime by definition;
: N = 12525251 is prime, so m-prime by definition;
: N = 13535351 = 61*221891 and 61 + 221891 - 1 = 221951 which is prime so N is m-prime;
: N = 15353531 is prime, so m-prime by definition;
: N = 16767671 = 19*79*11171 and 19*79 + 11171 - 1 = 12671 which is prime so N is m-composite;
: N = 17676761 = 3529*5009 and 5009 + 3529 - 1 = 8537 which is prime so N is m-prime;
: N = 18989891 = 131*144961 and 131 + 144961 - 1 = 145091 which is prime so N is m-prime;
: N = 19898981 = 41*43*11287 and 41*43 + 11287 - 1 = 13049 which is prime so N is m-composite;


: N = 12342342341 = 7*61*28904783 and 61*28904783 + 7 - 1 = 1763191769 which is prime so N is m-composite;
: N = 14324324321 = 17*193*283*15427 and 17*283*15427 + 193 - 1 = 74219489 which is prime so N is m-composite;
: N = 14224224221 is prime, so m-prime by definition;
: N = 14424424421 = 11*109*349*34471 and 109*349*34471 + 11 - 1 = 1311311321 which is prime so N is m-composite;
: N = 12442442441 = 11*13*31*73*38449 and 11*31*73*38449 + 13 - 1 = 957110969 which is prime so N is m-composite;
: N = 12442442441 = 11*13*31*73*38449 and 11*31*73*38449 + 13 - 1 = 957110969 which is prime so N is m-composite;
: N = 14334334331 = 19*3041*248089 and 19*3041 + 248089 - 1 = 305867 which is prime so N is m-composite;
: N = 13343343341 = 20047*665603 and 20047 + 665603 - 1 = 685649 which is prime so N is m-prime.