

August 19th

124Y2X is divisible by 2 and 9, but not 5.

How many such numbers are there?

X is therefore 2, 4, 6 or 8 (since the number is even, but not a multiple of 5)

To be a multiple of 9, the digits must sum to a multiple of 9.

The digit sum = $9 + X + Y$

Therefore $X+Y$ must be 9

If $X=2$, $Y=7$

If $X=4$, $Y=5$

If $X=6$, $Y=3$

If $X=8$, $Y=1$

There are **4** such numbers:

124722, 124524, 124326, 124128