March 25th

74Y2X is divisible by 2 and 9, but not 5.

How many such numbers are there?

x can be 2, 4, 6 or 8

To be divisible by 9, the sum of the digits must also be divisible by 9

Sum of the digits = 13 + x + y

Taking each possible value of x in turn:

x = 2 y = 3 (making the sum of the digits 18)

x = 4 y = 1 (making the sum of the digits 18)

x = 6 y = 8 (making the sum of the digits 27)

x = 8 y = 6 (making the sum of the digits 27)

There are 4 such numbers:

74, 322 74, 124, 74, 826, 74, 628