March 8th

How many two-digit numbers are twice the product of its digits?

If “ab” is twice the product of its digits, then…..

$$10a + b = 2ab$$

Hence $2ab - 10a = b$

Therefore $2a(b-5) = b$

Giving $a = \dfrac{b}{2b-10}$

So $5 < b < 10$

If b=6, a=3 36 is a solution

If b=7, a isn’t an integer

If b=8, a isn’t an integer

If b=9, a isn’t an integer

Therefore, **there is only 1 (which is 36)**