

I am thinking of a three-digit number.

- When it is divided by 9, the remainder is 3.
- When it is divided by 2, the remainder is 1.
- When it is divided by 5, the remainder is 4.

What is my number?

$$765 \div 4 = 191 \text{ remainder } 1$$

$$876 \div 5 = 175 \text{ remainder } 1$$

Does a three-digit number descending in digits divided by the next descending digit always have remainder 1?

Prove your answer.