

The 5-digit number $\underline{2018U}$ is divisible by 9.
What is the remainder when this number is divided by 8?

Recall that a number is divisible by 9 if the sum of its digits is a multiple of 9.

So let's test all possible values of U :

<u>U</u>	<u>Sum</u>	<u>Divisible?</u>
0	11	No
1	12	No
2	13	No
3	14	No
4	15	No
5	16	No
6	17	No
7	18	YES
8	19	No
9	20	No

Hence we must have $U = 7$

This means that the 5-digit number is 20187.

We have

$$8 \times 2523 = 20184$$

therefore the remainder is $\boxed{3}$