***** Mathematical Weekly *****

Week 28

There are many different ways to use the numbers in {1, 2, 3, 4, 5, 6, 7, 8, 9}, once and once only for each number, to form a 9-digit number. For example:

Among all the above possible 9-digit numbers, there is a particular number, denoted by A, which satisfies all the following requirements:

- A is divisible by 9.

- Removing the rightmost digit from A leaves a 8-digit number B, which is divisible by 8.

- Removing the rightmost digit from B leaves a 7-digit number C, which is divisible by 7.

- Removing the rightmost digit from C leaves a 6-digit number D, which is divisible by 6.

- Removing the rightmost digit from D leaves a 5-digit number E, which is divisible by 5.

- Removing the rightmost digit from E leaves a 4-digit number F, which is divisible by 4.

- Removing the rightmost digit from F leaves a 3-digit number G, which is divisible by 3.

- Removing the rightmost digit from G leaves a 2-digit number H, which is divisible by 2.
- Removing the rightmost digit from H leaves a 1-digit number I, which is divisible by 1.

Q: What is this amazing 9-digit number A?

GRC 😳

Hint: Answer has already been given above