NO PROBLEM!!! There is NO problem for this month. We will continue to provide problems beginning the coming September.

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★ Please **Submit** your solution to

- ✓ *Dr. Erol Akbas* at matexa@langate.gsu.edu **or**
- ✓ *Dr. Yuanhui Xiao* at matyxx@langate.gsu.edu

before the **deadline**: **Friday, May 27, 2011, 5:00PM**.

★ You may get a hard copy of this problem in the box for **Problem of the Month** in the 7^{th} floor of COE (College of Education).

★ The WINNER will be announced in the NEXT issue, and will be informed to claim his/her award by Dr. Yuanhui Xiao.

Problem of Last Month: Factorial Divisors. *Find the highest powers of 2 and 5 that divide* 98!.

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Winner: Max Suica. . . . . .

Solution. We write

$$n! = \prod_{p \in \text{primes}} p^{a_p}, \text{where } a_p = \sum_{k=1}^{\infty} floor(n/p^k).$$

Thus for $n = 98$, $a_2 = 95$ and $a_5 = 22$, and the highest powers of 2 and 5 that divide $n!$ are 2^{95} and 5^{22}, respectively.