

I U P U I
MATH CLUB TEASER #34

November 6, 2009
(due November 13, 2009)

Arrange the digits from 1 to 9 to form a number with the following properties:

- The 9-digit number is divisible by 9.
- If the rightmost digit is removed, the remaining 8-digit number is divisible by 8.
- If the 2 rightmost digits are removed, the remaining 7-digit number is divisible by 7.
- If the 3 rightmost digits are removed, the remaining 6-digit number is divisible by 6.
- If the 4 rightmost digits are removed, the remaining 5-digit number is divisible by 5.
- If the 5 rightmost digits are removed, the remaining 4-digit number is divisible by 4.
- If the 6 rightmost digits are removed, the remaining 3-digit number is divisible by 3.
- If the 7 rightmost digits are removed, the remaining 2-digit number is divisible by 2.
- If the 8 rightmost digits are removed, the remaining 1-digit number is divisible by 1.

The IUPUI Math Club invites everybody to submit solutions to its weekly recreational mathematics problem. Interested individuals and teams of up to four participants must submit a cover sheet (available at jagmath.usg.iupui.edu) together with their written solution. At the end of the semester, every IUPUI student that sent a correct solution will receive a certificate of merit. Prizes will be distributed among the IUPUI undergraduate teams that submit the most correct solutions.

Solutions are due one week after each problem is posted, and should be faxed to (317) 274-3460, dropped off in person at LD 270, or sent by campus or U.S. mail to:

Math Club Teaser
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