

## Problem of the Week-7: Certain 8-Digit Numbers

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Take any 4-digit number (e.g. 1234) and repeat the digits to obtain an 8-digit number (e.g. 12341234). Show that the resulting number is always divisible by 73.<sup>1</sup>

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<sup>1</sup>Posting Date 4/14/08. Submit solutions to Noah Aydin, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on 4/25/08.