

# Cal Poly Department of Mathematics

## Puzzle of the Week

October 16 - 22, 2009

Show that If an integer divides any member of the Fibonacci sequence then it divides infinitely many of them.

Note: Recall that the Fibonacci sequence  $\{f_1, f_2, f_3, \dots\}$  is defined recursively by  $f_1 = 1$ ,  $f_2 = 1$ , and for  $n > 2$ ,  $f_n = f_{n-1} + f_{n-2}$ .

*Solutions should be submitted to Morgan Sherman:*

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*before next Friday. Those with correct and complete solutions will have their names listed in next week's email announcement. Anybody is welcome to make a submission.*