## Problem of the Week-1: Last Digits of Triangular Numbers

The $n$th triangular number is the sum of the first $n$ positive integers. Find all digits that appear in the unit's place of infinitely many triangular numbers.

As always, show your work, fully explain and justify your answer.

Posting Date 1/12/14. Submit solutions to Noah Aydin, Mathematics Department, RBH 319 (e-mail or hard-copy, but hard copy submissions must include a time stamp) by 4 pm on $1 / 24 / 14$.

