

# Cal Poly Department of Mathematics

## Puzzle of the Week

May 8 - 14, 2009

On a very long, circular, isolated driving route there are a number of small gas stations, each with a limited supply of gasoline left. In total they contain exactly the amount of gasoline needed to get my car around one full circuit. Prove that, starting with an empty tank, there is some station I can start at which will allow me to complete one trip around the route.

Of course I will be collecting gasoline whenever I pass a station. Assume my car's tank is large enough to hold as much as necessary, and that no other cars will be taking any of the available gasoline.

*Solutions should be submitted to Morgan Sherman:*

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Office: bldg 25 room 310*

*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.*