1077-I1-2273   **Michael A. Jones*** (`maj@ams.org`), Mathematical Reviews, 416 Fourth Street, Ann Arbor, MI 48104, and **Rabab Abi-Hanna** and **Kenneth Krott**. *The Optimal Placement of Range Lights.*

Range lights are pairs of lighthouses on bays, rivers and other waterways that guide boats safely along a linear path, called the range line. To limit the expenses of building, operating, and maintaining the lighthouses, fewer lighthouses, and hence longer range lines, should be used. To keep a boat in a channel bounded by curves $y = f(x)$ and $y = f(x) + h$, optimally long range lines are secant and/or tangent lines to the two curves. Their placement depends on concavity and applies the Mean Value Theorem. I'll describe a project based on the optimal placement of range lights that has been used in a Calculus I class. (Received September 22, 2011)