



Lewis & Clark College

Department of Mathematical Sciences

Problem of the Week #1 (Spring 2012)

What is the limit

$$\lim_{n \rightarrow \infty} \left(1 + \frac{1}{2} + \cdots + \frac{1}{n} - \frac{1}{n+1} - \frac{1}{n+2} - \cdots - \frac{1}{n^2} \right)$$

equal to? Please justify your answer.

- This problem is due to Juozas Juvencijus Mačys.
- Solvers should include their name, address, and status at the College. Solutions can be mailed to MSC 110 via campus mail or placed in Yung-Pin Chen's mailbox in the Math Department Office. Solutions to the above *Problem of the Week* should be received by 5:00 p.m. Monday, January 30, 2012.