



## LEWIS AND CLARK COLLEGE

Department of Mathematical Sciences

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### PUZZLE OF THE WEEK (11/2/2016 - 11/8/2016)

Suppose that for some continuously differentiable, decreasing function  $f(x)$  defined on the real number line the series  $\sum_{n=1}^{\infty} f(n^2)$  converges. Is it necessarily the case that the series  $\sum_{n=1}^{\infty} \frac{f(n)}{\sqrt{n}}$  converges? Justify your claim.

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- The only correct solution to Puzzle of the Week #9 was submitted by Noah Benjamin. Congratulations!
- One possible solution of the Puzzle #9 is posted online. (Look for the Puzzle of the Week announcements on the departmental web-page.)
- Solvers of this week's puzzle should include their name, address, and status at the College. Solutions should be submitted to **Iva Stavrov** in BoDine 305; email submissions are encouraged (istavrov at lclark). Solutions should be received by the end of the day on **Tuesday, November 8th 2016**.