

# Cal Poly Department of Mathematics

## Puzzle of the Week

October 20 - 26, 2011

Find, for any positive  $\alpha \neq 1$ , the exact value of the sum

$$\sum_{n=0}^{\infty} \frac{1}{\alpha^{2^n} - \alpha^{-2^n}}$$

*Solutions should be submitted to Morgan Sherman:*

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*Email: sherman1 -AT- calpoly.edu*

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*before next Friday. Those with correct and complete solutions will have their names listed on the puzzle's web site (see below) as well as in next week's email announcement. Anybody is welcome to make a submission.*

<http://www.calpoly.edu/~sherman1/puzzleoftheweek>