Cal Poly Department of Mathematics

Puzzle of the Week

Feb 18-24, 2011

From Tom O'Neil:

Let $p(x) = 2 + 4x + 3x^2 + 5x^3 + 3x^4 + 4x^5 + 2x^6$ and for $y \in (0, 5)$ define

$$I(y) = \int_0^\infty \frac{x^y}{p(x)} dx.$$

For which y is $I(y)$ a minimum?

Solutions should be submitted to Morgan Sherman:

Dept. of Mathematics, Cal Poly
Email: sherman1 -AT- calpoly.edu
Office: bldg 25 room 310

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