
Problem of the Week

Number Seven

This week's problem is more combinatorial than trigonometric, but it is no less cool for that. Be sure to count carefully! That's your only hint.

How many values of x in the interval $(0, \pi]$ satisfy the equation

$$\prod_{k=1}^{12} \sin kx = 0 ?$$

FOLLOW THESE INSTRUCTIONS TO THE LETTER:

Please place your name and e-mail address at the top of this page. If you are receiving class credit for participating, please indicate the course number and your professor. Your answer to the problem, coupled with a clear explanation of how you arrived at it, should appear on the back of this page. Be sure to write neatly! If I can't easily read your paper, then I will discard it.

Due Wednesday, April 15 by 5:00 to Jason Rosenhouse in Roop 121. One weekly winner will receive a five dollar gift card to Greenberry's, and will be chosen randomly from among the correct answers.